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DL-WINDOWS™ for Trilogy Networx™
V4.0 USER'S GUIDE

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OI352C 05/13

Downloading Software for the Trilogy® Networx™ Line of Access Control Systems



DL6500
&
ETDLN



PL6500 &
ETPLN





PL6100



PDL6500
&
ETPDLN



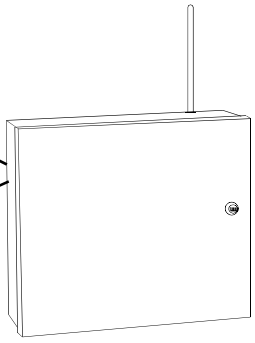
PDL6100



NETPDK



NETDK



NETWORXPANEL



Gateway "Wireless/Wired"
AL-IM80211



DL6100

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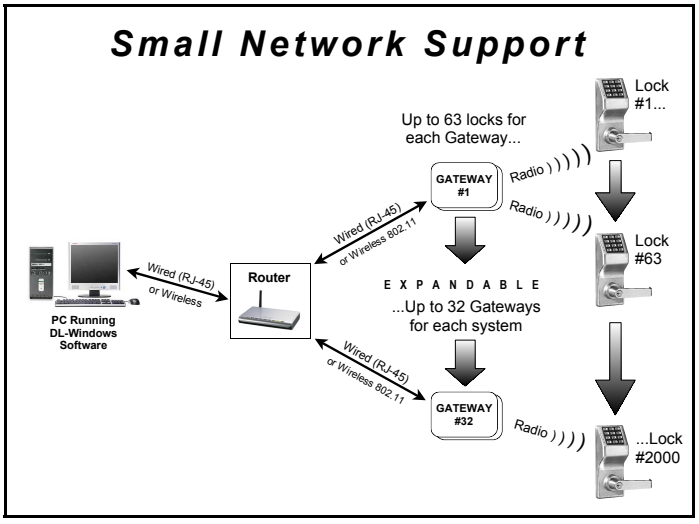
Radio and Television Interference Statement 67

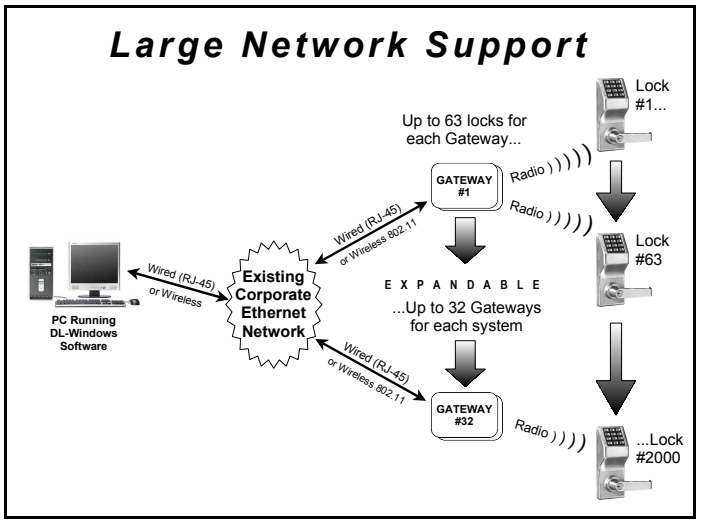
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Important: *DL-Windows is not a server application and is not designed for server use; the program and its database must be installed and maintained on a local PC, not a server computer. Trilogy® is a registered trademark of Alarm Lock. ProxCard® and ProxKey® are trademarks of the HID© Corporation.. Microsoft® and Windows® are trademarks of their the Microsoft Corporation. All other trademarks, service marks, and product or service names described in this manual are for identification purposes only and may be trademarks or registered trademarks of their respective owners. The absence of a name or logo in this document does not constitute a waiver of any and all intellectual property rights that NAPCO Security Technologies, Inc. has established in any of its product, feature, or service names or logos.*

Overview

Used with the Trilogy Networx™ series door locks and keypads, DL-Windows version 4.0.0 software (or later) allows you to upload and download programming features ***wirelessly*** using a computer network. With "wireless" communication, the various cables and/or an AL-DTM Data Transfer Module are NOT required to transfer data between DL-Windows and the wireless locks. With a few clicks of the mouse, you can use your computer to retrieve logs, download User Codes and program features into and out of each wireless lock in the system.





DL-Windows software is installed on a computer that is connected to a network (either a small Ethernet network or large corporate LAN). Connected to this network is an intermediate device called a *Gateway* that communicates via a private wireless signal to a radio located inside each door lock. In this way, the software allows full programming and control of each lock in the system. **Note:** In this manual, the word "lock" refers to all Networx™ series door locks and the NETWORXPANEL wireless control panel and its wireless keypads.

To ensure each physical lock is identified correctly by DL-Windows, the factory assigns each lock a unique Serial Number; after locks are installed on the doors and the Gateways are mounted, the Gateways search for new locks, allowing them to be enrolled into the system.

FLEXIBLE SETUP

In addition to wireless communication, *these wireless door locks can also be programmed at the keypad* (see the keypad programming instructions included with the lock). This means that locks can be installed on the doors and *immediately be put into use via keypad programming*--even before a wireless network is set up. Therefore, you can install the locks on the doors before configuring the wireless network, or you can set up the wireless network first and add locks later. If you wish, you can even start by designing a "virtual" system within DL-Windows (creating new Accounts, adding Users and configuring lock features, etc.), then set up the network and install the lock hardware later. But in the end, after your lock hardware is physically installed and the network is up and running, you can run DL-Windows to link the "virtual" system saved on your computer with the "real" lock hardware on the doors.

Note: Keypad programming of User Codes, Features, Time Zones, and Schedules is available as a *temporary* convenience to allow the lock to be put into use before installing and configuring a wireless network. Therefore, all lock programming added via the keypad cannot be retrieved into DL-Windows. If you decide to start programming your wireless lock via the keypad, we recommend you keep hardcopy records (in a secure location) of all Users, their User Codes, and any proximity cards that may have been programmed. Keeping complete and accurate records saves time because after the wireless network is set up, any programming added via the keypad must be re-added to DL-Windows and downloaded back to the lock(s).

CAPACITY

Each installed system can contain from 1 to 32 Gateways--and each Gateway can control up to 63 locks--for a maximum of 2000 locks allowed per Account; and the DL-Windows software can support, in theory, an unlimited number of Accounts. In addition, each Networx™ lock can contain up to 5000 Users!

MINIMUM WIRELESS SYSTEM

As shown in the overview drawings at left, you do not need a massively complex corporate network to run a working system. In fact, a minimum wireless system may consist of a laptop or desktop **computer** (to run DL-Windows), a home **router** (to allow connection to a computer network), and an Alarm Lock **Gateway** module (the intermediary between the network and the

locks). Although you can set up the wireless network first and add locks to the doors later, for the sake of convenience it is recommended that you have at least one Networx™ lock installed on a door before setting up your wireless system.

NETWORK SECURITY

The system uses AES (Advanced Encryption Standard) to protect the integrity of the data flow between the wireless router/network and the Gateways.

HOW TO USE THIS MANUAL

DL-Windows software is the basis for wireless lock programming. For those unfamiliar with using DL-Windows software, stop here and review the DL-Windows User Guide (OI237). It may be helpful to create a "test" Account in DL-Windows while walking through the examples presented in this User Guide and in OI237.

If you are already familiar with DL-Windows, the transition to working with wireless locks will be straightforward with slight changes in terminology. If you want to get started right away to see the system work, see the Quick Start Guide (OI362). This manual can be read from beginning to end, or can be used with the table of contents as a reference manual.

- **To install locks on the doors first**, use the Installation Instructions for the lock model you wish to install, then use the keypad Programming Instructions to put the locks into use.
- **To set up the wireless network system** and connect the network to DL-Windows, go to the "**Start Here**" section on page 7.

ORDERING INFORMATION

Several Gateway device models are available; all have the two antennas used to transmit to the locks via an Alarm Lock proprietary radio connection.

- **Gateway "Wireless/Wired" AL-IM80211** - Hardwired/ Wireless Gateway Interface Module. Supplied with its own Class 2 transformer to supply power; connection to a network is supported via either a *wired* connection (using a standard RJ-45 Ethernet cable) or a *wireless* connection (using a third antenna for 802.11 transmissions). Ensure adequate 802.11 coverage in the area where the "Wireless/Wired" Gateway is mounted. Supports up to 63 Networx Locks. Ceiling- or wall-mountable.
- **Gateway "Wired" AL-IME** - Hardwired Gateway Interface Module, supports up to 63 Networx Locks, connects directly to a network using a standard RJ-45 Ethernet cable. Ceiling- or wall-mountable; powered with Class 2, 6VAC transformer (supplied).
- **Gateway "Power over Ethernet" AL-IMEPOE** - Hardwired Gateway Interface Module + POE (Power Over Ethernet), supports up to 63 Networx Locks, connects directly to a network using a standard RJ-45 Ethernet cable and POE. Ceiling- or wall-mountable.
- **Gateway "Plenum Rated POE" AL-IMEPOEP** - Same as above "**AL-IMEPOE**", with added enclosure protections and installation hardware for mounting above "drop-ceiling" tiles or other locations subject to air pressure changes (HVAC air-filled spaces, etc.).
- **PDL6100/26D** - Cylindrical Trilogy® Networx™ Wireless Access Control Lock with built in HID Proximity ID Card Reader, full-metal digital keypad, integral bi-directional radio, 4 C-cell battery-operated (batteries supplied), serial number ID card, standard format SCI keyway for manual key override, 4⅞" ASA Strike (included).
- **DL6100/26D** - Cylindrical Trilogy® Networx™ PIN-Code Wireless Access Control Lock, as above, with metal digital keypad only. Standard format SCI keyway for manual key override, 4⅞" ASA Strike (included).
- **PDL6500** - Mortise Trilogy® Networx™ Wireless Access Control Lock with built in HID Proximity ID Card Reader, full-metal digital keypad, integral bi-directional radio, supplied batteries and serial number ID card. Standard format SCI keyway for manual key override, 4⅞" ASA Strike (included).
- **DL6500** - Mortise Trilogy® Networx™ Wireless Access Control Lock with full-metal digital keypad, integral bi-directional radio, supplied batteries and serial number ID card. Standard format SCI keyway for manual key override, 4⅞" ASA Strike (included).
- **PL6100** - Cylindrical Trilogy® Networx™ Wireless Access Control Lock with built in HID Proximity ID Card Reader (keypad removed for added security), integral bi-directional radio, 4 C-cell battery-operated (batteries supplied), serial number ID card, standard format SCI keyway for manual key override, 4⅞" ASA Strike (included).
- **PL6500** - Mortise Trilogy® Networx™ Wireless Access Control Lock with built in HID Proximity ID Card Reader (keypad removed for added security), integral bi-directional radio, supplied batteries and serial number ID card. Standard format SCI keyway for manual key override, 4⅞" ASA Strike (included).
- **ETPDLN, ETDLN & ETPLN** - Networx™ Wireless standalone access control exit trims add convenience, programming, flexibility and audit trail to most major manufacturers exit devices. Ideal for securing exterior doors in schools, hospitals and commercial buildings, Trilogy Exit Trims are feature rich with audit trail, multi-users and auto lock/unlock capabilities. For the highest security measures, the ETPDLN is outfitted with both PIN and HID Prox technology. Both ETDLN and ETPDLN locks come with a rugged, 12-button metal keypad and a non-handed fully field reversible clutch mechanism to

insure long life and durability. Add, delete, change users at the keypad or use our DL Windows software to manage your system at the PC with ease. Our Trilogy Exit Trims grant access for up to 2000 users, provide 40,000 event audit trail and 500 lock/unlock scheduled events with time zone support. Also available for purchase is our proximity-only Exit Trim model (ETPLN).

- **NETDK, NETPDK & NETWORXPANEL** - The NETDK and NETPDK (with proximity card reader) are secured single-door or double-door digital keypads for use within the wireless Networx™ system. One or two keypads can be wired to the dedicated NETWORXPANEL control panel to provide controlled access to a door by releasing a locking device (such as a magnetic lock or electric door strike) when a proper User Code (and/or a proximity credential to the NETPDK) is presented. The NETWORXPANEL inputs support two of any combination of NETDK or NETPDK keypads, PLUS up to two Wiegand devices. See WI1881, WI1855 and WI1856 for additional information.
- **DL-WINDOWS** - Alarm Lock Trilogy Microsoft Windows-based software application, v4.0.0 or higher, supports Trilogy Networx and Trilogy Standalone Locks, with single database. *Free of charge* and downloadable online at www.alarmlock.com.
- **OI362** - Wireless Quick Start Guide.
- **OI352** - Wireless Network Setup & DL-Windows Configuration Instructions (this manual).
- **WI1790** - PDL6100 Keypad Programming Instructions.
- **WI1820** - DL6100 Keypad Programming Instructions.
- **WI1835** - PDL6500 & ETPDLN Keypad Programming Instructions.
- **WI1836** - DL6500 & ETDLN Keypad Programming Instructions.
- **WI1843** - PL6100 Programming Instructions.
- **WI1844** - PL6500 & ETPLN Programming Instructions.
- **WI1674** - PDL6100 and DL6100 Installation Instructions.
- **WI1676** - PDL6100 and DL6100 Door Installation Template.
- **WI1881** - NETDK & NETPDK Installation Instructions
- **WI1855** - NETWORXPANEL Programming Instructions with the NETDK & NETPDK keypads
- **WI1856** - NETWORXPANEL Installation Instructions

See www.alarmlock.com for a complete list of all available standard Trilogy and Networx™ series devices and manuals (downloadable in PDF format).

DL-WINDOWS SYSTEM REQUIREMENTS

The DL-Windows application has been tested and approved for an IBM-compatible P4 1.6GHz computer with 256MB RAM and a minimum of 100MB of hard drive space running Microsoft Windows 98, 2000 or XP with one unused RS-232 Serial Communications port (COM 1-4) required. If a COM port is unavailable, please contact customer support for one of our USB adapters (**MX1130** or **ALPCI2-U**). Depending on your system demands, a slower PC may function properly but with significant user interface problems, including long intervals for the system to respond.

Important: DL-Windows is not a client-server application (i.e. is not multi-user). The program and its database must be installed and maintained on a single PC.

GATEWAY SPECIFICATIONS

Note: For all Gateway modules, network activity or bandwidth usage does NOT occur until the user operates DL-Windows software to send programming to (or receive log data from) locks. Exception: During the Emergency Lockdown Command, Gateways communicate through the network. Gateways will send less than 1000 bytes during these Emergency Commands (for more information regarding Emergency Commands, see page 49).

Model AL-IM80211
("Wireless/Wired" Gateway)

Wireless Specifications
Wireless Standards: IEEE 802.11b; 802.11g
Frequency Range: 2.412 – 2.484 GHz
Output Power: 14dBm +1.5 dBm/-1.0 dBm
Maximum Receive Level: -10dBm (with PER < 8%)
Data Rates with Automatic Fallback: 54Mbps – 1Mbps
Range: Up to 328 feet indoors
Modulation Techniques: OFDM, DSSS, CCK, DQPSK, DBPSK, 64 QAM, 16 QAM

Network Interface
Interface: Wireless 802.11b, 802.11g and 10/100 Ethernet
Protocols: TCP/IP, UDP/IP, DHCP

Security
IEEE 802.11 - PSK with AES Encryption 128-bit

Power Consumption
Average Power Consumption:
- 1300mW (WLAN mode; maximum data rate)
- 300mW (WLAN mode; idle)
- 750mW (Ethernet mode)

Peak Supply Current: 650mA
Input voltage: 5 - 6 volts AC/DC

Environmental
Operating Temp: -20° to 60°C (-4° to 140°F)
Storage range: -40° to 85°C (-40° to 185°F)

Model AL-IME
("Wired" Gateway)

Network Interface
Interface: Ethernet 10Base-T or 100Base-TX (using RJ-45 jack)
Protocols: TCP/IP, UDP/IP, DHCP

Encryption
128-bit AES Rijndael encryption

AL Radio Link
900MHz GFSK
50 Channels
10mW power output

Input Power
Voltage: 5 - 6 volts AC/DC

Environmental
Operating Temp: -20° to 60°C (-4° to 140°F)
Storage: -40° to 85°C (-40° to 185°F)

Model AL-IMEPOE
("Power Over Ethernet" Gateway)

Model AL-IMEPOEP
("Plenum Rated POE" Gateway)

Network Interface
Interface: Ethernet 10Base-T or 100Base-TX (using RJ-45 jack)
Protocols: TCP/IP, UDP/IP, DHCP

Encryption
128-bit AES Rijndael encryption

AL Radio Link
900MHz GFSK
50 Channels
10mW power output

Input Power
POE Voltage: 48 volts DC nominal
Class 2

Environmental
Operating Temp: -20° to 60°C (-4° to 140°F)
Storage: -40° to 85°C (-40° to 185°F)

Compliance
802.3af POE Standard (AL-IMEPOEP only)
UL 2043: UL Standard for Safety Fire Test for Heat and Visible Smoke Release for Discrete Products and Their Accessories Installed in Air-Handling Spaces

START HERE

This section will help you define the steps required to suit the specific needs of your installation. Let's start with the big questions first, because the installation steps that follow depend on your answers. **Note:** The underlined words are defined in the **Terminology** section on page 9.

PRELIMINARY QUESTIONS

You may not have answers to the following questions now, but understand that they are intended to encourage thought and help evaluate your needs.

☞ **Are you planning to use a large Corporate Network or a smaller network provided by single router?**
Smaller networks permit the dynamic assignment of IP addresses by DHCP; larger networks may require static (fixed) IP addresses be reserved by your network administrator.

☞ **Will you use "Emergency Commands"?**
*Three Emergency Commands are available in your wireless system: "**Global Lock Down**" locks all doors in the system; "**Global Passage**" unlocks all doors in the system; "**Return to normal**" exits these Emergency Commands. Emergency Commands will NOT work if you use DHCP (static IP addresses are required). For more information regarding Emergency Commands, we strongly recommend you familiarize yourself with this topic on pages 49-53, and also with the **Tools** menu and its ability to send the IP Table to selected (or all) Gateways on page 37.*

☞ **Will your Gateways need to communicate across multiple Subnets?**
To improve security and processing performance, network administrators often divide their corporate Intranets into interconnected but separate segments called "subnets".

If the answer to ANY ONE of the above questions is "yes", we recommend *static IP addresses* be reserved for exclusive use by your Gateways. If the answers are "no" for all of the questions, and you want to use a smaller network provided by a router, you can assign static IP addresses yourself using the instructions that came with your router; if you want to use a corporate network, you must contact your network administrator to have static IP addresses reserved for your use.

SUBNETS

Use the following information when installing multiple wireless Networx Gateways within a corporate Intranet that contains multiple "subnets".

To improve security and processing performance, corporate Intranets are often divided into interconnected but separate segments called "subnets". The IP (Internet Protocol) address is a unique address of a device (such as a computer or a Gateway) connected to a TCP/IP corporate Intranet.

DL-Windows can only Discover Gateways when the Gateways are connected to the same subnet to which DL-Windows is also connected.

IP addresses are written as four groups of numbers separated by periods; these groups are called "octets". IP addresses can be permanent ("static") or dynamically assigned (by DHCP) when a device, such as a Gateway, is powered.

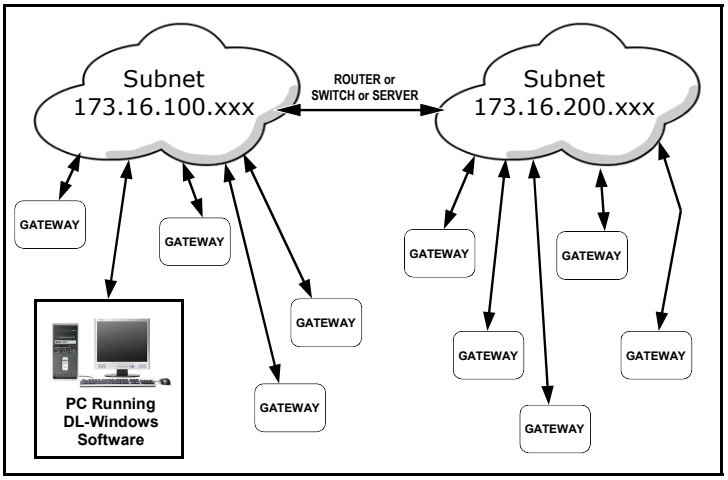
Class B Subnets

Some corporate Intranets contain multiple "Class B" subnets; the "Class B" refers to the octet that does not change, if naming each octet from left to right. An example of two "Class B" subnets where the first two octets of each network IP address remain the same are:

A B C D

- Subnet 173.16.100.xxx
- Subnet 173.16.200.xxx

In this example, the "A" and "B" octets "173" and "16" are the same within the network. (**Note:** The "xxx" is a way of showing a variable number).



GATEWAYS ON DIFFERENT SUBNETS WITHIN A NETWORK

As shown in the image above, if the computer running DL-Windows is connected to the first subnet (173.16.100.xxx), and several Gateways are connected to the second subnet (173.16.200.xxx), *DL-Windows will ONLY be able to communicate with the Gateways on the second subnet when:*

- *ALL Gateways use only static IP addresses, and*
- *The network administrator allows for open addressing between the two subnets in the network*

The network administrator may decide to use routing tables or may specify blocks of addresses through which the two subnets can freely communicate in both directions. Regardless of the method selected, your network administrator must determine the range of network addresses to assign to the Gateways and to the DL-Windows computer. As shown below, three address fields must be obtained from your network administrator: **IP Address**, **Subnet Mask**, and **Default Gateway**.

Why we recommend using static IP addresses

We recommend using static IP addresses for each Gateway you install because they have the following advantages:

- DL-Windows software performs more smoothly because the software does not have to waste time re-locating Gateways that have had their IP addresses changed by DHCP;
- Static IP addresses allow operation across subnets in

large corporate networks (such as those that exist between buildings);
- Static IP addresses allow Emergency Commands (such as "Emergency Lockdown") to be used (see Emergency Commands on page 49);

Contact the Network Administrator

If you know that you will install your wireless Networx system within a large corporate network that includes multiple subnets, we recommend you start by contacting the corporate network administrator and request the following:

- **IP Address** - An address for each Alarm Lock Gateway device

  _____

- **Subnet Mask** - Filtering data (mask bits) as required by the aforementioned IP Address

  _____

- **Default Gateway** - The address of the physical device, such as a router, for the current subnet to which DL-Windows will be connected

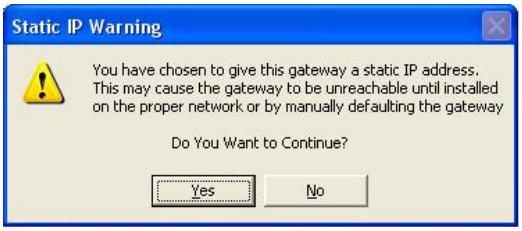
  _____

In addition, inquire about wireless authentication and encryption, as required.

ASSIGNING STATIC IP ADDRESSES TO GATEWAYS

DL-Windows can only Discover Gateways when the Gateways are connected to the same subnet to which DL-Windows is also connected. To allow DL-Windows residing on one subnet to communicate with Gateways located on a second subnet (with both subnets located within a single network) a typical installation strategy is:

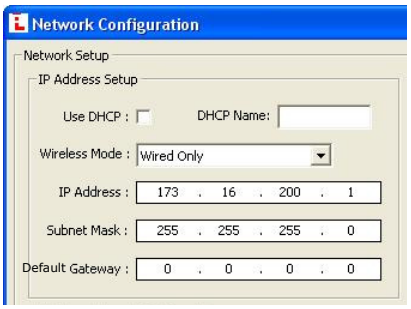
1. Estimate the number of Gateways needed in the installation.
2. Install DL-Windows on a PC connected to the first subnet (for example, plug the PC into a wall network outlet the network administrator confirms is wired to the first subnet).
3. Open DL-Windows and create a new (or open an existing) Account.
4. Create a virtual lock "Profile" for each lock installed.
5. Power up a Gateway and connect the Gateway to the same (first) subnet to which DL-Windows is connected (in the example above, "173.16.100.xxx"). This connection to the first subnet may be through a second network socket in the wall, or to a router (or switch) connected to the same network socket in the wall that the DL-Windows PC is also connected.
6. In DL-Windows, discover the Gateway and Assign the Gateway to the selected DL-Windows Account.
7. In the **Gateway Configuration** screen, click **Tools**, **Configure Network Settings**. In the **Network Configuration** screen, (shown below) uncheck **Use DHCP**, and a warning popup appears:



WARNING POPUP

Click **Yes** to close the warning popup. In the **Network Configuration** screen, type the three addresses obtained from your network administrator into the following three fields:

- **IP Address**
- **Subnet Mask**
- **Default Gateway**



NETWORK CONFIGURATION SCREEN

Click **Save Configuration and send to Gateway**.

8. Physically disconnect (unplug) the Gateway from the first subnet, physically relocate and plug the Gateway into the second subnet (in the example above, from "173.16.100.xxx" to "173.16.200.xxx). Install the Gateways in their final locations.

   As stated previously, *Emergency Commands* require all Gateways in the system use static IP addresses to communicate with each other. Therefore, to ensure Emergency Commands operate correctly, use the following menu item to manually distribute the static IP addresses of each Gateway (listed within DL-Windows) to all Gateways in the system.

   Click the **GW Confg** button to open the **Gateway Configuration** screen. Click **Tools**, **Send IP Table to all Gateways**.

   Important: All Emergency Commands MUST be tested weekly (or daily if necessary) to ensure their correct operation.

   The remaining tasks are to install your locks on the doors, and have DL-Windows Discover them (as outlined in the section **CONFIGURING DL-WINDOWS FOR WIRELESS LOCK USE**):

9. Discover physical locks on the Gateway.
10. Assign (add) discovered locks to the Gateway.
11. Link lock to a Profile.
12. Send Profile to lock.

Terminology

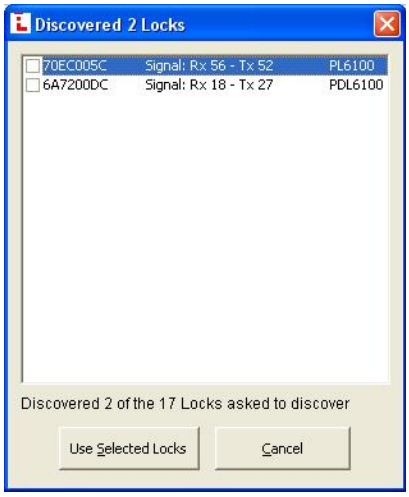
The following words are used throughout this manual to convey specific concepts and/or actions used in DL-Windows version 4.0.0 software (or later).

Assign - Add to hardware or specify a relationship. Can be used with User Codes and locks ("to *assign* User Codes to specific locks"), or with hardware identification ("the factory *assigns* each lock a unique Serial Number"), or a fixed wireless communication channel between locks and a Gateway ("locks *assigned* to a Gateway").

Communicate - To send or receive a transmission. To avoid the directionally confusing terms of "download" and "upload", the word "communicate" is used in this guide.

Configure- To "assign" (add) discovered physical locks to a Gateway (by sending the "Lock Config Table" to the selected Gateway). Configuring ensures a fixed wireless communication channel exists between selected physical locks and a selected Gateway.

The **Gateway Configuration** screen allows you to select a Gateway and allow that Gateway to discover physical locks; these physical locks can then be assigned to that selected Gateway. When the **Use Selected Locks** button is clicked (in the "**DISCOVERED LOCKS**" **POPUP**), the Gateway



"DISCOVERED LOCKS" POPUP

sends "configuration data" to the selected locks. This "configuration data" contains items (such as an internal lock designation, a specific radio channel and security data) that are all embedded in what is called a "Lock Config Table". This "configuration data" instructs the physical lock(s) to communicate ONLY with that Gateway and prevents other Gateways from communicating with the physical lock(s).

In short, the Gateway tries to "configure" the selected physical locks by assigning the selected physical locks to the Gateway.

DHCP (Dynamic Host Configuration Protocol) - Software that automatically assigns IP addresses to devices that are connected to a network. It eliminates having to manually assign fixed IP addresses.

Discover - To "discover" Gateways, the system searches for Gateways not yet assigned to an Account; to "discover" locks, the selected Gateway searches for locks not yet assigned to Gateways.

Download - See Communicate.

Import - When the Account information stored in DL-Windows is lost (such as with a stolen laptop)--AND--the DL-Windows backup files are either non-existent, inadequate or lost, the "Import" options can be used to rebuild an existing wireless system using the data stored inside the onboard memory of the installed Gateway device(s). See the **Tools**, **Import** menu options on page 38 for more information.

IP Address - The IP (Internet Protocol) address is a unique address of a device (such as a computer or a Gateway) connected to a TCP/IP corporate Intranet. IP addresses are written as four groups of numbers separated by periods; these groups are called "octets". IP addresses can be permanent ("static") or dynamically assigned (by DHCP) when a device, such as a Gateway, is powered.

Link - In DL-Windows, the word "Link" is used to describe the specific action of associating a "virtual lock" Profile to the serial number of the physical lock installed on the door.

Locate - **With physical lock(s),** the Locate command causes the physical lock to "beep" and flash its LED (helpful when you wish to find the physical lock or confirm the lock's wireless connection is operational). **When used with a Gateway**, refers to re-discovering a "lost" Gateway device on the network. Used when an operational Gateway has lost its network connection, and appears listed in red colored text on the **Gateway Configuration** screen.

Lock Config Table - When a Gateway is "discovered" and added to an Account, DL-Windows sends a **Lock Config Table** to the Gateway. This **Lock Config Table** is stored in the Gateway memory, and may or may not contain assigned physical lock data. The table is a database structure that is designed to hold the physical lock data (serial numbers, etc) when physical locks are "assigned" to the Gateway.

Physical - Same as "**Real**". Tangible, not virtual. See **Virtual**.

Profile - **Lock "Profiles"** may also be called "Lock Programs" or "Virtual Locks". A lock "Profile" can be thought of as a "virtual" lock, created within DL-Windows, that contains all of the instructions that a "real" ("physical") lock uses to perform its various functions. Use DL-Windows to create a lock "Profile" on your computer, then transfer and store the "Profile" in the memory of the "real" lock. The lock "Profile" is essentially a computer database file that maintains User Codes, Features, Time Zones and Schedules. When creating these virtual lock Profiles, you are also designing the entire virtual system--conceptualizing which doors will have which locks, adding User names and allowing or restricting

access to the virtual locks by the various Users in the Account.

Real - Same as "**Physical**". Tangible, not virtual. See **Virtual**.

Subnet (SUBNETwork) **-** To improve security and processing performance, network administrators often divide their corporate Intranets into interconnected but separate segments called "subnets". Subnets also allow multiple users to access the Intranet with the same subnet address. A router is typically used to allow network traffic to pass between subnets.

Subnet Mask - The IP protocol makes use of a Subnet Mask to more efficiently route packets to their correct network destinations. When a Gateway receives a data packet, the Subnet Mask indicates how many bits of the packet's destination address are to be used for routing and which bits are to be "masked" (ignored). The Subnet Mask can be thought of as a "filter" that allows the system to ignore unnecessary information, thus increasing efficiency. This information must be obtained from your network administrator.

Upload - See Communicate.

Virtual - Simulated on a computer. DL-Windows allows you to create a lock "Profile" that can be thought of as a "virtual" lock, created within DL-Windows, that contains all of the data that a "real" (physical) lock uses to perform its various functions. When creating these "virtual" lock Profiles, you are also designing the entire "virtual" system--conceptualizing which doors will have which locks, adding User Names and allowing or restricting access to the virtual locks by the various Users in the Account. Later, you will "**Link**" these lock Profiles with the real locks installed on the doors.

HARDWARE INSTALLATION

For a *minimum* wireless system, you need:

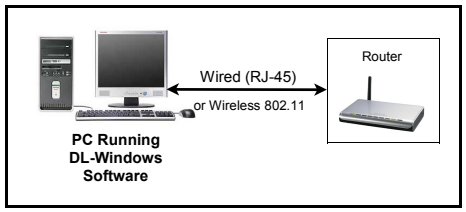
- A laptop or desktop **computer** (to run DL-Windows)
- A wired or wireless home **router** (to allow connection to a computer network)
- An Alarm Lock **Gateway** module (the intermediary device between the network and the locks)

Note: Before proceeding, you should have a working knowledge of DL-Windows. See the DL-Windows User Guide (OI237) for basic information such as how to install and open DL-Windows, how to create Accounts, how to add Profiles to Accounts, etc.

1. **Install the DL-Windows software** into your computer as described in the DL-Windows User Guide (OI237).

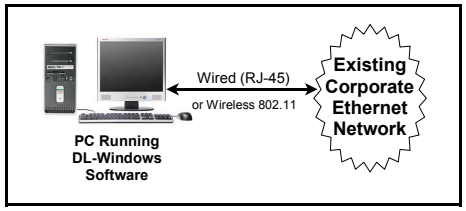
2. **Connect your computer to a network**
   If you want to set up a "small network" with a router, follow the instructions "Small Network" that follow. If you want to use a "large network" such as an existing corporate Ethernet (such as a LAN), skip down to the "Large Network" section, below.

   SMALL NETWORK
   You can create your own "small network" by using a wired or wireless router.



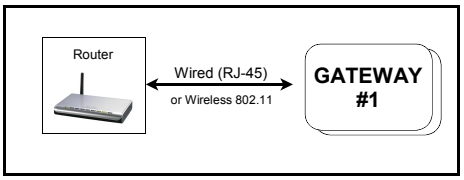
   For the connection between your computer and the router, most laptops and some desktop computers contain a wireless network card (also called a "wireless network interface controller") to allow for wireless communication between your computer and a wireless router; if your computer does not have a wireless network card, you can usually connect the "non-wireless" network card in your computer to the router using an double-ended RJ-45 to RJ-45 (8P8C) Ethernet cable.

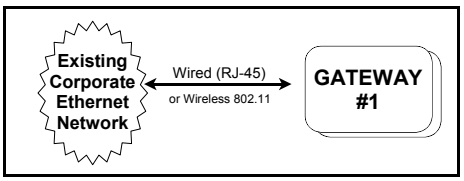
   LARGE NETWORK
   If you have access to a "large network" such as an existing corporate Ethernet network (such as a LAN), connecting to a network may be as simple as plugging your computer into an RJ-45 wall jack. In this case, you may wish to contact the Ethernet network administrator and inform them as to your plans.



   For the connection between your computer and a large Ethernet network, most laptops and some desktop computers contain a wireless network card (also called a "wireless network interface controller") to allow for wireless communication between your computer and a this large network. Contact the network administrator for this kind of wireless connection.
   For computers *without* a wireless network card, connect the "non-wireless" network card in your computer to the network as follows: Connect one end of the Ethernet cable to the computer network card RJ-45 socket (usually located at the back of your computer); connect the other end of the cable to the RJ-45 socket at a wall jack or a modem that is part of the corporate Ethernet network / LAN. Note that wall jack or modem access points usually need to be configured first by the network administrator before the network will allow a connection.

3. **The Network Connection to the Gateway**
   The connection between the network (the router or the existing corporate Ethernet network) and the Gateway device may be either **directly wired** using an Ethernet cable --or--**wirelessly** via 802.11x transmissions, as shown in the illustrations below:





   Remember, the Gateway device will eventually be mounted on a wall or in a ceiling; therefore a wired network connection to the Gateway device is relatively straightforward because once you plan the final location of the Gateway and you plan the physical location of the network connection, the only remaining task is to run a wire between these locations.
   The instructions for the wired connection are in the next section; for wireless connection instructions, skip to the "**Wireless Network Connection to the Gateway**" section below.

   Wired Network Connection to the Gateway
   The double-ended Ethernet cable is used to connect the network **to any of the Gateway models**. Simply plug one end of the Ethernet cable into the network Router or a network wall socket (at any location within the premises) or network modem. Then connect the other end of the Ethernet cable into the

Gateway module. Now skip to step 4 below, and read about the importance of selecting a favorable Gateway mounting location and signal strength considerations.

Wireless Network Connection to the Gateway
This wireless connection will only work with a "Hardwired/Wireless" Gateway model AL-IM80211.

To ensure a fixed wireless communication channel exists between the network and the Gateway, you must first ***temporarily*** connect the network to the Gateway with an Ethernet cable.
Why? When the Gateway is first powered, the very first thing the Gateway tries to do is obtain an IP Address--from anywhere. If an installation takes place in a facility that contains several active networks (and/or active routers), there is a possibility that an unknown network (or router) will provide the Gateway with an IP address *outside* the network you want to use.
The solution is to ***temporarily*** connect the desired network to the Gateway with the double-ended Ethernet cable. This temporary wired connection ensures that all network settings (that you want to use) are sent DIRECTLY into the Gateway, thus ensuring that the Gateway device will ONLY communicate with that specific router or network.

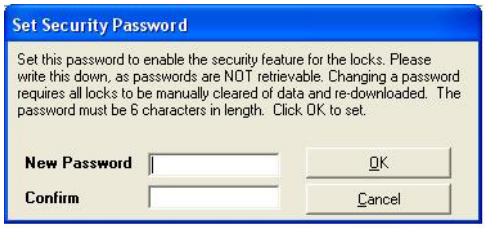
3a. Connect the network to the Gateway with an Ethernet cable. Plug one end of the Ethernet cable into the network Router or a network wall socket (at any location within the premises) or network modem. Connect the other end of the cable to the Gateway module.

3b. Open DL-Windows. Create a new Account or select an existing Account. Add a New Lock Profile to the Account. In the **New Lock Profile** screen, select a Networx™ "Lock Type" (for example "**DL6100**"). Click the **GW Confg** button. *For all new Accounts and existing Accounts **without** passwords, a popup appears requesting that you set a "Security Password". For existing Accounts **with** Passwords, this popup will not appear, therefore jump to step "3c" below.*



The above popup appears because there must be a way for DL-Windows to differentiate between separate *wireless* Accounts. For example, if a large office building has one company on the 15th floor and another company on the 16th floor, radio signals can overlap from these two separate Accounts. How does DL-Windows prevent this confusion between wireless signals? The answer is to require a unique "Security Password" for each Account that contains wireless locks, and to embed that password within the radio transmissions. (Click **OK** to close this popup).

On the DL-Windows main screen, click **Tools**, **Set Security Password**, and the **Set Security Password** dialog appears:



SET SECURITY PASSWORD DIALOG

Important: Do **NOT** share passwords between Accounts, otherwise the radio signals can become intermixed! Be sure you record--in writing--all Account passwords in a safe location; once set, passwords are NOT retrievable from DL-Windows! Changing a password in a wireless system requires all wireless locks in the Account to be manually cleared of all data and re-enrolled.

Note: The password must be exactly 6 characters (no more--no less) in length. Retype the same password in the **Confirm** field; click **OK** to save the password, or click **Cancel** to exit without saving. Click **OK** and a confirmation popup appears:



Click **OK** to close the above popup, then click the **GW Config** button to open the **Gateway Configuration** screen.

3c. In the **Gateway Configuration** screen, click the **Discover New Gateways And Auto Add to Account** button:

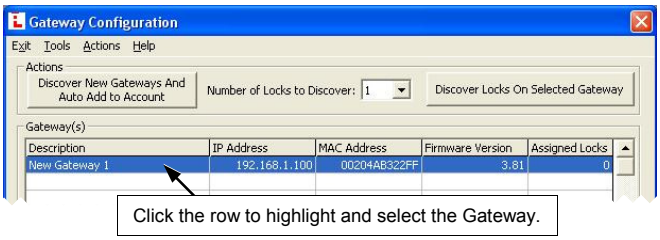


A **Discover New Gateways** popup appears.



Hardware Installation (cont'd)

Click **Yes** and DL-Windows searches the network; since the Gateway has this direct (albeit temporary) wired connection to the network, DL-Windows will find this Gateway, and will add the Gateway to the current Account. The Gateway will then be listed in the **Gateway Configuration Screen** grid. The following image is an example of what will appear:

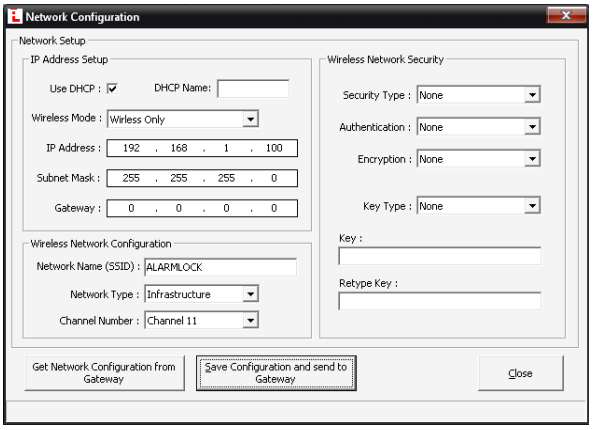


3d. Click on this "**New Gateway 1**" to select this Gateway. Write down the IP Address and MAC Address shown.

IP Address _____

MAC Address _____

3e. Click **Tools**, **Configure Network Settings**, and the **Network Configuration** screen appears:



If using DHCP:

- From the **Wireless Mode** pull-down, click **Wireless Only**.
- Type the network name in the **Network Name (SSID)** field. For more information, refer to the setup guide for the router being used.
- From the pull-down, select the appropriate **Network Type** being used, in most cases it will be **Infrastructure**.
- Select the appropriate **Channel Number** for which the router is set. - For more information, refer to the setup guide for the router being used.
- By default, **Wireless Network Security** is disabled. We recommend to use "MAC Address Filtering" for security if your router supports this feature. If **Wireless Network Security** is desired, refer to the router setup for wireless security.

If NOT using DHCP:

- If you are using Static IP Addresses, refer to the router setup guide for static IP address setup information.

3f. Disconnect the Ethernet cable from the network Router (or network wall socket) and also from the Gateway module.

Gateway ID Card

We recommend that when installing the Gateway, a blue-colored "Gateway ID Card" be completed. Since Gateways are often installed in ceilings or other hidden locations, their physical locations may be easily forgotten. This ID card may prove very useful when replacing Gateways, or when selecting a Gateway to use to discover locks, or whenever an installed Gateway needs to be physically located.

4. Mounting the Gateway module

A Gateway module acts as an interface between a computer network and the Networx™ wireless locks.

Gateway Mounting Location

Give careful consideration to the location of the Gateway when planning the layout of the system. Gateways should be mounted in elevated areas (such as drop ceilings), and should be *centrally located* within the separate lock installations. Select a convenient location that allows access to an AC outlet (to plug in the Gateway supply transformer for models AL-IM80211 and AL-IME) and allows access to the RJ-45 Ethernet cable running from the Gateway to the router/network. You can plan for a single Gateway to cover a circle several hundred feet in diameter, greater within open areas without walls. Choose a location as high above ground level as practical (home attic installations are *not* recommended), keeping in mind that metal objects may adversely affect reception. It may be helpful to draw a layout of the system, identifying all proposed Gateway locations and the anticipated door locations. Also include notations indicating construction materials in use. Although wood and wallboard construction will have little effect upon signal strength at the lock, concrete or brick can reduce signal strength by up to 35%, while steel-reinforced concrete or metal lath and plaster can reduce Gateway transmitter strength as much as 90%.

*All Gateway models should be mounted **vertically** on either a wall or ceiling. Horizontal "flat" mounting of the Gateway enclosure should be specifically avoided.*

Note: In difficult installations wherein distant Gateways pose reception problems, the use of multiple gateways throughout the premises is recommended.

Hardware Installation (cont'd)

First Time Gateway Power Up

We supply a "Class 2" 6V power supply (*never substitute power supplies; use only the supplied unit*) that is wired to the terminal strip located on the Gateway PC board. Wiring is non-polarized, so connect either wire to either of the two terminals.

When the Gateway is first powered, the red light flashes slowly (about once every 2 seconds), indicating the unit is looking for a valid IP address (unit may take up to 90 seconds to find a valid address). If the unit finds a valid IP address prior to 90 seconds, the red light flickers.

If the unit does not obtain a valid IP address after 90 seconds, the flashing rate increases to one flash per second, and will attempt to find an IP address later.

The one flash per second flash rate indicates the Gateway is "configured". At this point you can reset the GW:

Reset the Gateway

At this point, the Gateway is mounted and connected to the router (or the network) with the RJ-45 cable. Apply power to the Gateway and the red light flashes slowly, about once every 2 seconds. Before securing the Gateway housing cover, reset the Gateway memory--even if the Gateway has never been used. *Press and hold the "***RESET***" button and the red light turns on continuously; continue to hold the button and the red light will start to flicker. Release the button and the red light will continue to flicker*.

"Resetting" the Gateway clears all memory and ensures that any residual voltage or test data existing from the factory is cleared from the unit. Always reset the Gateway for new installations; you can also reset the Gateway anytime after the Gateway is powered. Secure the Gateway housing cover with the screws provided.

Note: See page 25 for additional information regarding resetting the Gateway.

Configuring DL-Windows for Wireless Lock Use

CONFIGURING DL-WINDOWS FOR WIRELESS LOCK USE

Now that the wireless network hardware is installed, you can use DL-Windows to design your "virtual" system.

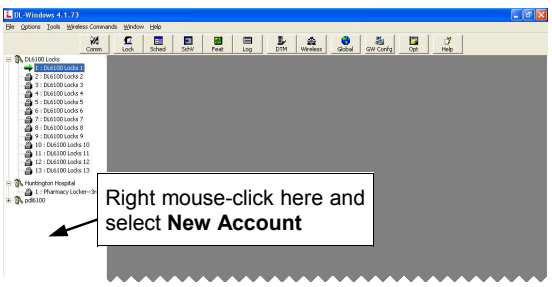
The following list are the simplified steps required in DL-Windows to get a *minimum* system (one Gateway and one lock) up and running. These numbered steps correspond with the detailed procedures that follow:

1. **Create a new Account**
2. **Create a virtual lock "Profile"**
3. **Discover the Gateway**
4. **Add ("Assign") the Gateway to an Account**
5. **Discover physical locks on the Gateway**
6. **Assign (add) discovered locks to the Gateway**
7. **Link lock to a Profile**
8. **Send Profile to lock**

It may be helpful to create a "test" Account in DL-Windows while walking through the procedures below; later you can always go back and create a separate Account that accurately reflects a genuine installation.

1. **Create a new Account.**
   Technically, an "Account" is a DL-Windows computer database file that allows you to organize and maintain multiple lock installations. But in practical terms, an Account is often named after the building or company location in which a lock or multiple locks have been installed. For example, the Account Name might be "Overbrook Hospital" and listed in that Account are the 4 locks you just installed on the 7th floor. In DL-Windows, Accounts can be created, edited, cloned and deleted. The benefit of an Account is that it allows you to add the name of a User ONCE and then assign that User to multiple locks within a building, rather than having to enter and re-enter the same User information again and again for each lock in the Account. Enter the name of the User once in the **Global Users** screen, then sit back and assign that User to the locks you wish, with just a few clicks of the computer mouse.

   Double-click the DL-Windows shortcut, or click **Start**, **Programs** in Windows to find and start the DL-Windows software. The DL-Windows main screen opens (see "**DL-WINDOWS MAIN SCREEN**" image).

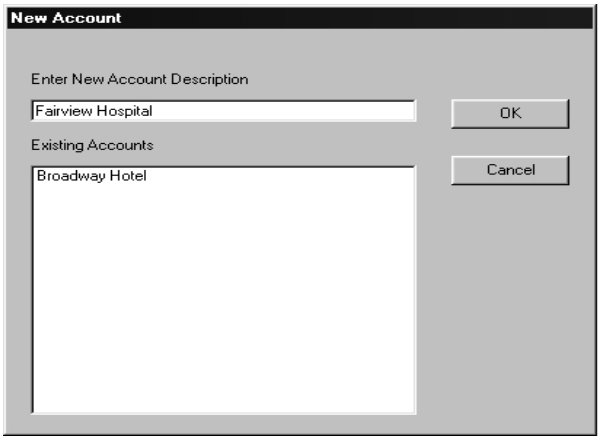


DL-WINDOWS MAIN SCREEN

(For new installations, a popup appears with directions). First click **OK** to clear the popup, then, as directed by the popup, use your mouse to right-click anywhere in this white box (the "Account Tree" area at the left), and select **New Account**. The **New Account** dialog opens.

Enter New Account Description

Enter the **New Account Description** in the field shown in the "**NEW ACCOUNT DIALOG**" image. The Account Description will typically be the name of the company or facility where a lock(s) will be installed. Note that existing Accounts from previous installations are also displayed. Click **OK** to create this new Account.
(If you wish to delete an Account, right mouse-click the name of the Account and select **Delete Account** from the menu. A warning popup will appear, and click **Yes** to confirm, and click **No** to cancel).



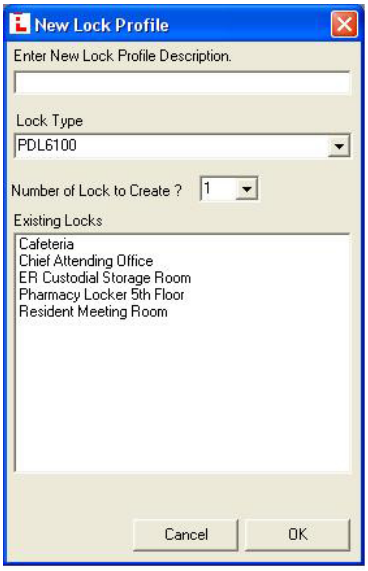
NEW ACCOUNT DIALOG

2. **Create new virtual "lock Profiles"** (also called "Lock Programs" or "virtual locks"). A lock "Profile" can be thought of as a "virtual" lock, created within DL-Windows, that contains all of the instructions that a real lock uses to perform its various functions. Use DL-Windows to create a lock Profile on your computer, then transfer and store the Profile in the lock memory. The lock Profile is essentially a computer database file that maintains User Codes, Features, Time Zones and Schedules.

New Lock Profile

After clicking **OK** in the **New Account** dialog, a popup appears asking if you would like to create a new lock Profile. Click **Yes**, and the **New Lock Profile** dialog appears (see the "**NEW LOCK PROFILE SCREEN**" image).
Type the description of the new lock, which will typically be the name of the room in the facility that the lock is securing. Select the **Type of Lock** to be programmed from the drop-down list (for example, the 6100 series). When finished, click **OK**. After a few seconds, the new Profile is created and DL-Windows automatically opens the **Global Users** screen. **Note:** To add a new lock to an

existing Account, first open any existing lock in the Account, then right-click in the white column and select *New Lock*. The **Number of Locks to Create?** field allows you to create multiple locks of the same lock type. You can also duplicate ("clone") locks.

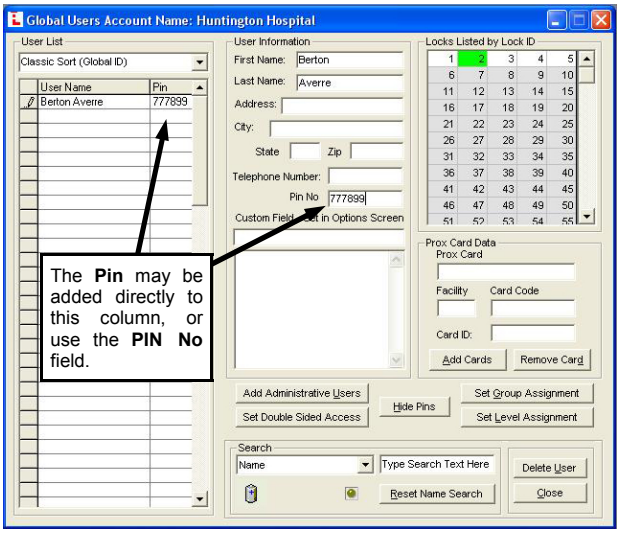


NEW LOCK PROFILE SCREEN

Using the Global Users Screen



You can always open the **Global Users** screen with the **Global** button (see the "**GLOBAL USERS SCREEN**" image). Programming of User Codes, Programmable Features and Schedules can now begin. **Note:** The screens that display on StartUp can be selected under **Options** (click the **Opt** button).

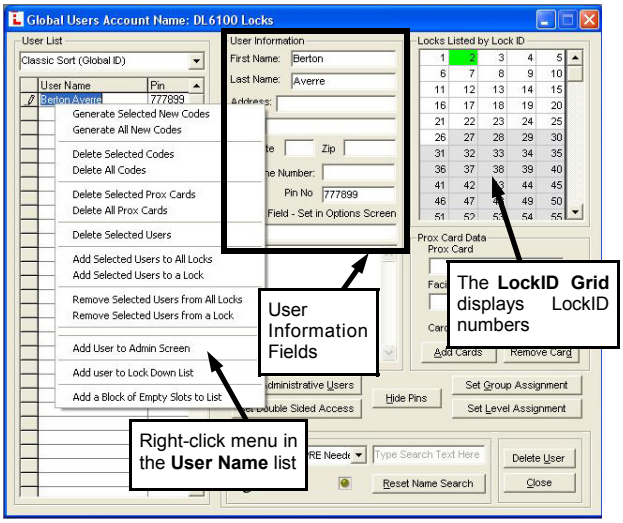


GLOBAL USERS SCREEN

The **Global Users** screen is used to enter User information and to assign Users to specific locks. User lists can be imported from other DL-Windows Accounts or from comma delimited formatted lists. Administrative Users can be accessed through the **Global Users** screen via the **Add Administrative Users** button.

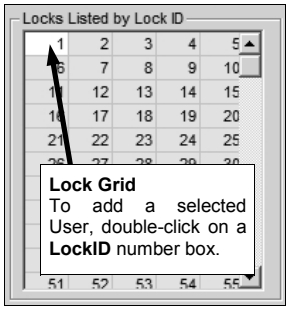
Add Users and User Codes

As shown in the "**ADD USERS AND USER CODES**" image, type the first and last name of a User in the *User Information Fields*, and enter the remaining personal information as needed. Note that the names entered in the **First Name** and **Last Name** fields also appear in the **User Name** list. **Note:** A specific PIN Number ("User Code") may be typed in the **Pin No.** field for each User (or typed in the **User List** area "**Pin**" column). Random User Codes may be auto-generated for one or many Users by right-clicking in the **User Name** list. In addition, a *Custom Field* (located under the **Pin No.** field) allows a customized field of up to 15 characters. This field is set in the **Options** screen (click the **Opt** button) and once changed remains identical for all locks in all Accounts.



ADD USERS AND USER CODES

Note: The **ID** column in the **User Name** list is used for identifying Users *in this screen only* and is NOT associated with positions in the **Lock Data** screen. If you wish, this column may be hidden using the **Options** screen (click the **Opt** button and uncheck "**Show Global User ID's**").



LOCK ID GRID

The **LockID Grid** displays LockID numbers and is color-

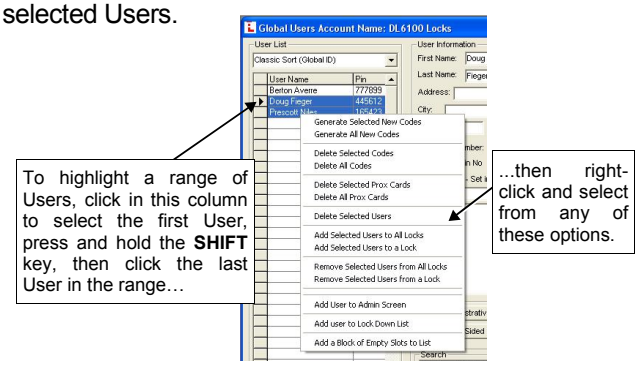
coded to describe the state of the selected User:

- Green = User entered in the lock and enabled
- Red = User entered in the lock but disabled
- White = User not in the lock

Double-click on a **LockID Grid** number to cycle through the colors of the LockID number (from *white* to *green* to *red* and back to *white again*) thus adding, disabling or removing a User as needed. In this way, the **LockID Grid** can be used to add a User to any lock in an Account. One or multiple Users can also be added to one or more locks via the right-click menu in the **User Name** list.

Select a Range of Users

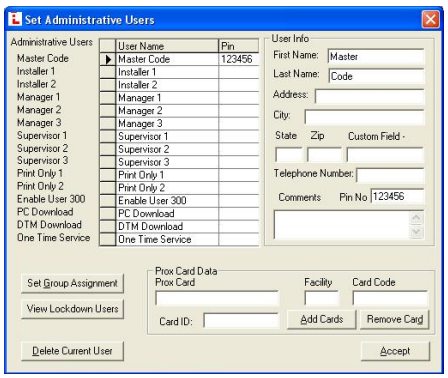
To select a range of Users, click to select the first User, press and hold the **SHIFT** key, then click the last User in the range (you can also press **CTRL** and click individual Users). Within the range of Users highlighted, right-click in the highlighted area to display the menu as shown in the "**SELECT A RANGE OF USERS**" image. Click a selected action in the menu to perform the action for the selected Users.



SELECT A RANGE OF USERS

Random User Code Generation

Random User Codes may be generated for one or many Users. (**Note:** To avoid User Number conflicts, it is recommended to first assign specific User Codes to Users before selecting random User Code generation). To generate random Codes for multiple users, press and hold the **CTRL** key, click the right arrow ("►") located to the left of the **User Name** to select each User(s), then right-click and select "**Generate Selected New Codes**". You can select a range of Users (as described above) and click **Generate All New Codes** to create new codes for all Users.



SETTING ADMINISTRATIVE USERS

Administrative Users

The **Add Administrative Users** button displays the **Administrative Users** screen. Administrative Users are the same for all locks within an Account. Enter information the same way as if adding a basic User.

3. **Discover new Gateways**.

4. **Add ("Assign") the Gateway to an Account**

Note that steps 3 and 4 are listed together because these two tasks can be performed with one button, as you will see.

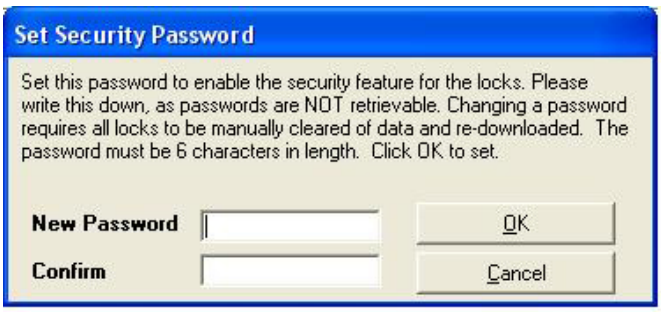


Upon clicking the **GW Confg** button, a popup appears: (if this popup does not appear, skip to the section "**Using the Gateway Configuration Screen**").



This popup appears because there must be a way for DL-Windows to differentiate between separate wireless Accounts. For example, if a large office building has one company on the 15th floor and another company on the 16th floor, radio signals can overlap from these two separate Accounts. How does DL-Windows prevent this confusion between wireless signals? The answer is to require a unique "Security Password" for each Account that contains wireless locks, and to embed that password within the radio transmissions. (Click **OK** to close this popup).

On the DL-Windows main screen, click **Tools**, **Set Security Password**, and the **Set Security Password** dialog appears:



SET SECURITY PASSWORD DIALOG

Important: Do **NOT** share passwords between Accounts, otherwise the radio signals can become intermixed! Be sure you record--in writing--all Account passwords in a safe location; once set, passwords are NOT

Configuring DL-Windows for Wireless Lock Use (cont'd)

retrievable from DL-Windows! Changing a password in a wireless system requires all wireless locks in the Account to be manually cleared of all data and re-enrolled.

Note: The password must be exactly 6 characters (no more--no less) in length.

Retype the same password in the **Confirm** field; click **OK** to save the password, or click **Cancel** to exit without saving. Click **OK** and a confirmation popup appears:



Bad Security Code

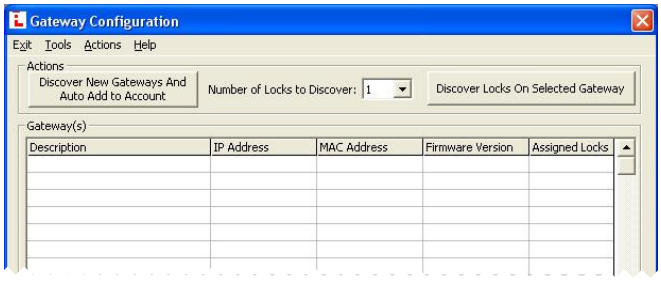
If you attempt to discover Gateways in an Account, and new Gateways are found within radio range but are already in use within another Account, the following popup appears:



Using the Gateway Configuration Screen

Click the **GW Confg** button to open the **Gateway Configuration** screen (see the "**GATEWAY CONFIGURATION SCREEN**" image).

This management screen is the focal point of the DL-Windows wireless system. With this screen you can add new Gateways, search for locks, check system status, and control the most common aspects of the system hardware--with just a few clicks of the computer mouse.



GATEWAY CONFIGURATION SCREEN

To start the process of adding Gateways into the Account, click the **Discover New Gateways And Auto Add to Account** button.



(TWO ACTIONS IN ONE BUTTON)

Note that this one button combines two actions--the "discovering the Gateway(s)" action, and the "adding the Gateway(s) to the current Account" action.

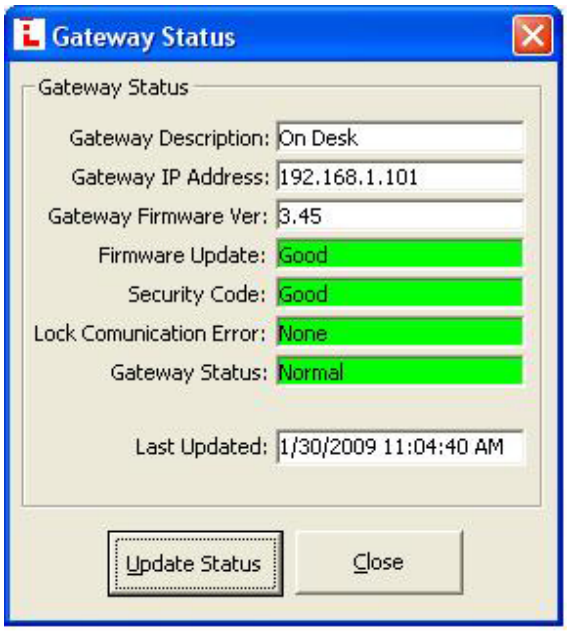
A **Discover New Gateways** popup appears; click **Yes** and DL-Windows searches the network and lists the Gateways that are found in the grid shown in the "**GATEWAY CONFIGURATION SCREEN**" image.



DISCOVER NEW GATEWAYS POPUP

For each Gateway, the table displays the Gateway **Description**, assigned **IP Address**, the unique **MAC Address** of the Gateway (assigned at the factory), the Gateway **Firmware Version** and the number of locks assigned to the Gateway ("**Assigned Locks**").

To confirm the status of the Gateway, simply click **Tools**, **View Gateway Status** (see the "**VIEW GATEWAY STATUS** " image).



VIEW GATEWAY STATUS

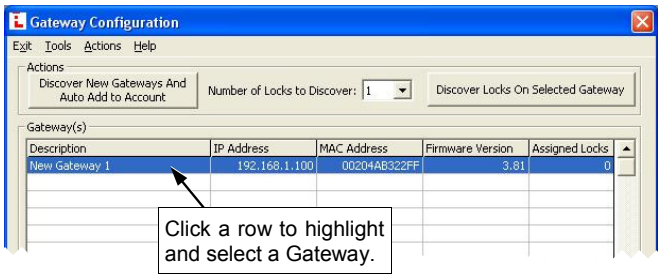
Click the **Update Status** button to send a request through the network for the condition of the Gateway, and the Gateway's response populates the fields in this screen. If an element of data is outdated or if a communication connection is broken, the relevant fields turn red

to warn of the possible malfunction. Green colored fields indicate the attributes are within acceptable limits as set by DL-Windows. To exit this screen, click **Close**. **Note:** For new installations, some data may not yet exist, and therefore several fields may be empty.

5. Discover physical locks on the Gateway

Each Networx™ lock is identified by a unique serial number assigned and programmed into the lock firmware at the factory. To find installed locks, click the **GW Confg** button to open the **Gateway Configuration** screen.

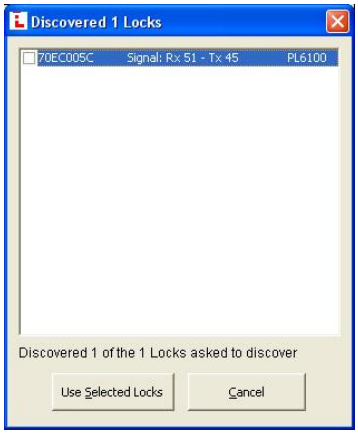
As shown in the "**SELECTING A GATEWAY**" image, click to highlight and select the Gateway to which you want to assign ("add") the installed locks. The Gateway selected will transmit the discovery request radio signal to the locks in the vicinity. Only those locks within range that have not already been configured will respond.



SELECTING A GATEWAY

The maximum search time allowed for each discovery request is 1 minute. To minimize the search time, this screen allows you to limit the search to a certain quantity of installed locks. In addition, you can manually stop the discovery process at any time by pressing the **Esc** key on the keyboard. If you know the number of installed locks to be discovered, select that number and the discovery process will stop the moment that number of locks are found. If the number of locks selected exceeds the actual number physically installed, the discovery process will continue for either a maximum of 1 minute or until the **Esc** key is pressed.
Example: If the number selected is 10, but in fact only 8 locks exist, the system may find all 8 locks, but will keep searching for 10 until the one minute timeout duration expires--or until the **Esc** key is pressed.
Click the **Number of Locks to Discover** pull-down list and select a number of locks that you want to detect. Click the **Discover Locks On Selected Gateway** button to initiate the search.

The "**DISCOVERED LOCK**" image displays the results when one lock was requested to be discovered and one lock was found:

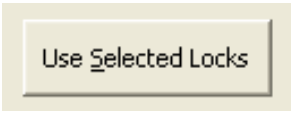


DISCOVERED LOCK

6. Assign (add) discovered locks to the Gateway

In "**DISCOVERED LOCK**" example image, a popup screen entitled "**Discovered 1 Locks**" appears, indicating the serial number of the lock, the signal strength and the lock model.

To assign ("add") the discovered lock serial number(s) to the selected Gateway, click the check box next to each lock. To assign, click **Use Selected Locks**; to exit without assigning ("adding") any locks, click **Cancel**.



Note: When the **Use Selected Locks** button is clicked (in the "**Discovered Locks**" popup), the Gateway sends "configuration data" to the selected locks. This "configuration data" contains items (such as an internal lock designation, a specific radio channel and security data) that are all embedded in what is called a "Lock Config Table". This "configuration data" instructs the physical lock(s) to communicate ONLY with that Gateway and prevents other Gateways from communicating with the physical lock(s).

7. Link lock to a Profile.

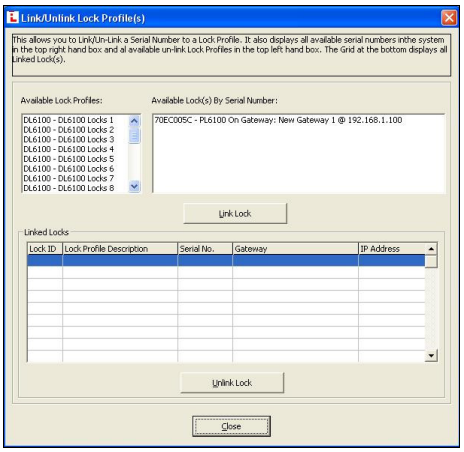
In DL-Windows, the word "Link" is used to describe the specific action of associating a "virtual lock" Profile to the serial number of the physical lock installed on the door.



LINK LOCKS POPUP

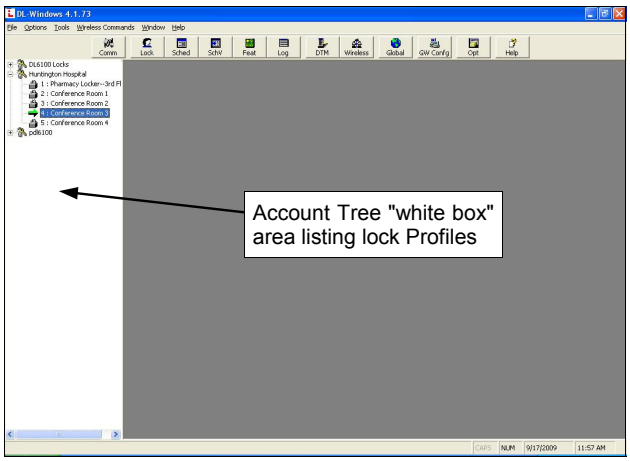
After clicking **Use Selected Locks**, a **Link Locks** popup appears, asking if you want to link your new locks now (see **LINK LOCKS POPUP**). Click **Yes** to open the **Link/Unlink Lock Profiles** screen or click **No** to cancel. (see **LINK / UNLINK PROFILES** image).

Configuring DL-Windows for Wireless Lock Use (cont'd)



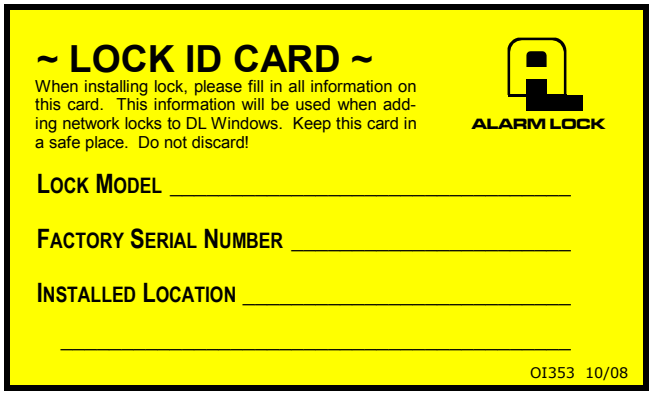
LINK / UNLINK PROFILES

The top half of the **Link/Unlink Lock Profile(s)** screen contains two fields: "**Available Lock Profiles**" and "**Available Lock(s) By Serial Number**".
The lock Profiles listed in the **Available Lock Profiles** field are the same that were created in the "white box area" of the main DL-Windows screen (the Account Tree area). See the "**LOCK PROFILES**" image.



LOCK PROFILES

In the **Available Lock Profiles** field, click to select and highlight the lock Profile. In the **Available Lock(s) By Serial Number** field, click to select and highlight the corresponding lock serial number. We recommend that when installing the lock on the door a yellow-colored "Lock ID Card" (see the "**SAVE THIS LOCK ID CARD**" image) be completed; the information on this card should be used when performing this lock Profile linking process.



SAVE THIS LOCK ID CARD

Click the **Link Lock** button to save this link association within DL-Windows and to add the data to the table located in the bottom half of the **Link/Unlink Lock Profile (s)** screen. If you link in error, click the **Unlink Lock** button, and the previously selected lock Profile and serial number will return to their respective fields.

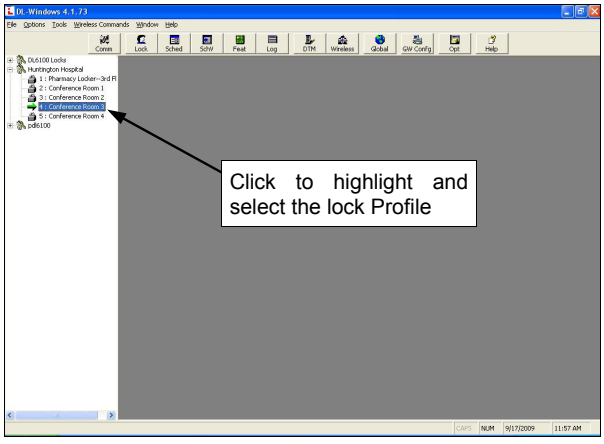
8. Send Programming to lock

After linking, a **SEND PROGRAMMING TO LOCK NOW** popup automatically appears requesting if you wish to send the lock Profiles to the physical lock(s):



SEND PROGRAMMING TO LOCK NOW POPUP

Click **Yes** to send the lock Profile in DL-Windows to the onboard memory located inside each physical lock; click **No** to cancel without communicating. If you click **No**, you can always request the lock communication manually as outlined in the following step.



SELECT THE PROFILE

Configuring DL-Windows for Wireless Lock Use (cont'd)

In the DL-Windows main screen, click to highlight the lock Profile (see the "**SELECT THE PROFILE** " image).

Click the **Comm** button on the DL-Windows main screen, then click **Communicate with current Network lock**. The **DL-Windows Network Lock Comm Screen** opens (see the "**CLICK THE COMM BUTTON**" image).



CLICK THE COMM BUTTON

This screen includes the name of the lock Profile in the **Lock Name** field, and lists the specific elements of the lock Profile to be transmitted. Note that checking the individual elements will take less time to transmit than compared with checking "**Send/Receive All**". See the "**SELECT THE ELEMENTS TO BE SENT**" image.



SELECT THE ELEMENTS TO BE SENT

For new installations, check "**All**" and click the **Start Communication** button. The status bar at the bottom of the window will indicate the communication progress. When communication is complete, a popup will appear. Click **OK** to close the popup, then click **Close** to close the **DL-Windows Network Lock Comm Screen**.

Congratulations! Locks can now be put into use and controlled wirelessly!

Normal Tasks

DL-WINDOWS TASKS

Add a new lock Profile to an Account

Adding a new lock Profile is a common task in DL-Windows, usually performed after creating a new Account. See page 15, step 1 ("**Create a new Account**") and step 2 ("**Create new virtual lock Profiles**") for step-by-step instructions.

Delete a lock Profile from an Account

Open the DL-Windows main screen and find the Account Tree "white box" area listing lock Profiles. Simply right-click the Profile and click **Delete Lock Profile**.

Note: Performing this action (clicking **Delete Lock Profile**) does not remove programming from the physical lock because communication between DL-Windows and the physical lock does not actually occur.

REPLACING HARDWARE

Replacing an existing Router

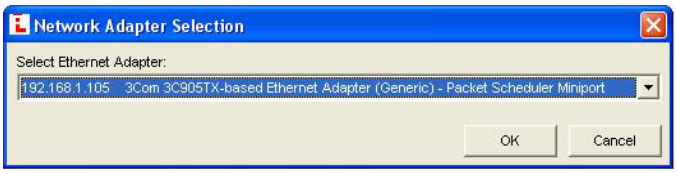
Remove the existing router and install either a wired or wireless router as described in its instructions.

For the connection between the computer and the router, most laptops and some desktop computers contain a wireless network card (also called a "wireless network interface controller") to allow for wireless communication between your computer and a wireless router; if your computer does not have a wireless network card, you can usually connect the "non-wireless" network card in your computer to the router using an RJ-45 Ethernet cable.

For the connection from the router to the network, the router is plugged into an Ethernet network source -- usually either a modem or a wall jack. As shown in the overview drawing on page 3, with "Large Networks" the computer may be connected directly to the network (usually just a wall jack) with an RJ-45 Ethernet cable. **Note:** If the computer is connected directly to the network via a wall jack, the Gateway module may also be connected directly to the network (for example, via another wall jack) at any location within the premises.

Click the **GW Confg** button to open the **Gateway Configuration** screen. Click **Tools**, **Select Network Adapter**. The **Network Adapter Selection** screen that appears allows you to identify the Ethernet "network interface card" (NIC) you are using inside your computer to communicate with the Gateway devices in your system. Some computers have a printed circuit board that plugs into the motherboard, other computers have the network adapter (Ethernet) built into the motherboard, thus precluding the need for a separate Ethernet card. Remember, the router or corporate Ethernet network is connected to this Ethernet adapter with an Ethernet cable (RJ-45 plug).

Select Ethernet Adapter Click the pull-down menu to select the IP address of the router or the IP address of the existing corporate network on which the Gateway is installed. Click **OK** to save.



Replacing an existing Gateway

DL-Windows makes it easy to replace an existing Gateway device with a new one. Click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight the Gateway in the list that you want to replace, then click **Actions**, **Replace Gateway with new one**. *Be sure to remove power from the old Gateway.* See page 46 for the complete instructions.

Replacing a physical lock

A physical lock is currently installed on a door, is fully enrolled in the wireless system, but needs to be replaced with a new lock on the same door. Proceed as follows:

Remove the old lock from the door, and install the new lock as per the installation instructions WI1674. Make note of the old and new lock serial numbers and have these numbers available when you use DL-Windows.

In DL-Windows, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight the Gateway in the list *to which the old lock was assigned*, then click **Tools**, **Delete Locks by Serial Number**.

The **Delete Serial Number(s)** screen opens. Check the old lock's serial number and click the **Delete Selected Serial Number(s)** button.

In the **Gateway Configuration** screen, click the **Number of Locks to Discover** pull-down list and select a number of locks that you want to detect; in this case, you can select "1" because you are only adding one new lock to the system. Click the **Discover Locks On Selected Gateway** button to initiate the search.

A popup screen entitled "**Discovered 1 Locks**" will appear, indicating the serial number of the new lock, the signal strength and the lock model of this newly installed lock.

Add the newly discovered lock serial number to the Gateway by clicking the check box next to the lock. Click the **Use Selected Locks** button.

A **Link Locks** popup appears asking if you want to link your new locks now (if the popup does not appear, click **Tools**, **Link / Unlink Lock Profiles**. Click **Yes** to open the **Link / Unlink Lock Profiles** screen.

In the "**Available Lock Profiles**" field, click the Profile assigned to the lock that is being replaced, and click the serial number of the newly installed lock in the "**Available Lock(s) By Serial Number**" field.

After linking, a **Send Profile to Lock Now** popup automatically appears requesting if you wish to send the lock Profiles to the physical lock (if the **Send Profile to Lock Now** popup does not appear, go to the DL-Windows main screen, click to highlight the lock Profile, then click the **Comm** button and click **Communicate with current Network lock**). The **DL-Windows Network Lock Comm Screen** opens. Check "**All**" and click the **Start Communication** button. When communication is complete, click the **Close** button.

I moved a lock from one door to another door, but now the lock is out of range of its Gateway...what do I do?

This procedure can be described as simply deleting a lock from its existing Gateway and re-discovering the lock on another Gateway (within range of the lock's new location).

If you need to install and add a new Gateway to the system, see "**Adding a new Gateway to an existing system**" further in this section.

First, delete the lock serial number from the Gateway to which it is currently assigned. The yellow **Lock ID Card** with the lock's serial number can be used for operations of this kind. In the **Gateway Configuration** screen, click **Tools**, **Delete Locks by Serial Number**. In the **Delete Serial Number(s)** screen, check the serial number of the lock (the lock that was moved from one door to another), then click the **Delete Selected Serial Number(s)** button.

Next, re-discover the lock serial number on another Gateway. Click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a Gateway in the list that is closer to the lock's new location, then click **Actions**, **Discover Locks on Selected Gateway**.

A popup screen entitled "**Discovered 1 Locks**" will appear, indicating the serial number of the re-discovered lock, its signal strength and lock model.

Add the re-discovered lock serial number to the Gateway by clicking the check box next to the lock. Click the **Use Selected Locks** button.

A **Link Locks** popup appears asking if you want to link your new locks now (if the popup does not appear, click **Tools**, **Link / Unlink Lock Profiles**. Click **Yes** to open the **Link / Unlink Lock Profiles** screen.

In the "**Available Lock Profiles**" field, click the Profile previously assigned to the lock that was re-discovered, and click the serial number of this lock in the "**Available Lock(s) By Serial Number**" field.

After linking, a **Send Profile to Lock Now** popup automatically appears requesting if you wish to send the lock Profiles to the physical lock (if the **Send Profile to Lock Now** popup does not appear, go to the DL-Windows main screen, click to highlight the lock Profile, then click the **Comm** button and click **Communicate with current Network lock**). The **DL-Windows Network Lock Comm Screen** opens. Check "**All**" and click the **Start Communication** button. When communication is complete, click the **Close** button.

ADDING NEW HARDWARE

I just finished installing a new wireless lock on a door. How do I add this new wireless lock to my existing wireless system?

In theory, after installing the lock on the door, you would want to use a Gateway in the system that is physically closest to the new lock installation; the closer the Gateway, the better the radio signal between the lock and the Gateway.

To ensure you select the "closest" Gateway, it is useful to make note of all Gateway locations in the system. But if you do not know which Gateway is closest, you can discover the lock on each Gateway in turn, writing down the reported signal strength to each Gateway, then compare all signal strengths and select the Gateway with the strongest signal.

We recommend that when installing the lock on the door a yellow-colored "Lock ID Card" be completed; the information on this card makes it easier when adding new locks to the system.

For an existing Account, start by creating a new lock Profile to which this new hardware will eventually be linked, :

1. **Create new virtual lock Profile**

   Open the DL-Windows. In the main screen, click the **Open** button and the Account "white space" opens at the left, listing all Accounts. Double-click the Account name into which you want to add this new lock, displaying all lock Profiles in the Account. Notice the Account name is highlighted in blue. Right-click the Account name, opening the right-click menu, and click **New Lock(s) Profile**. The **New Lock Profile** dialog opens.

   In the **New Lock Profile** dialog, type a description of

the new lock, which will typically be the name of the room in the facility that the lock is securing. Select the **Lock Type** to be programmed from the drop-down list (for example, the 6100 series), then click the **Number of Locks to Create** pull-down menu and select the number "1". When finished, click **OK**. After a few seconds, the new Profile is created and DL-Windows automatically opens the **Global Users** screen.

2. **Discover the new physical lock with the Gateway**

   Each Networx™ lock is identified by a unique serial number assigned and programmed into the lock firmware at the factory. To find installed locks, click the **GW Confg** button to open the **Gateway Configuration** screen.

   In the **Gateway Configuration** screen, click to highlight and select the Gateway to which you want to assign ("add") the new lock. The Gateway selected will transmit the discovery request radio signal to the new lock in the vicinity; if the new lock is within radio range, the lock will respond.

   The maximum search time allowed for each discovery request is 1 minute. To minimize the search time waiting period, this screen allows you to limit the search to a certain quantity of installed locks. In addition, you can manually stop the discovery process at any time by pressing the **Esc** key on the keyboard. Since you know the number of installed locks to be discovered is "1", in the **Number of Locks to Discover** pull-down list, select "1" and the discovery process will stop the moment "1" lock is found. (If the number of locks selected exceeds the actual number within radio range, the discovery process will continue for either a maximum of 1 minute or until the **Esc** key is pressed).

   Click the **Discover Locks On Selected Gateway** button to initiate the search.

3. **Assign (add) discovered locks to the Gateway**

   A popup screen entitled "**Discovered 1 Locks**" will appear, indicating the serial number of the new lock, its signal strength and lock model. If the serial number does not appear in this screen, click **Close** and try again; if the serial number does not appear after repeated tries, you may need to stop here and add a new Gateway to the system (see "**Add a new Gateway to an existing system**" in this section)

   In the "**Discovered 1 Locks**" popup screen, assign ("add") the discovered lock serial number(s) to the selected Gateway by clicking the check box next to the lock serial number. Click **Use Selected Locks**.

4. **Link lock to a Profile**.

   A **Link Locks** popup appears, asking if you want to link your new lock now to the Profile created in step 1. Click **Yes** to open the **Link/Unlink Lock Profiles** screen.

   The top half of the **Link/Unlink Lock Profile(s)** screen contains two fields: "**Available Lock Profiles**" and "**Available Lock(s) By Serial Number**".

   The lock Profile listed in the **Available Lock Profiles** field is the same that was created in step 1; click to select and highlight this lock Profile. In the **Available Lock(s) By Serial Number** field, click to select and highlight the corresponding lock serial number. Click the **Link Lock** button to save this link association within DL-Windows and to add the data to the table located in the bottom half of the **Link/Unlink Lock Profile(s)** screen.

5. **Send Profile to lock.**

   After linking, a **Send Profile to Lock Now** popup automatically appears requesting to send the lock Profile to the physical lock. Click **Yes** to send the lock Profile in DL-Windows to the onboard memory located inside the new physical lock.

   The **DL-Windows Network Lock Comm Screen** opens.

   Check "**All**" and click the **Start Communication** button. The status bar at the bottom of the window will indicate the communication progress. When communication is complete, a popup will appear. Click **OK** to close the popup, then click **Close** to close the **DL-Windows Network Lock Comm Screen**.

Adding a new Gateway to an existing system.

Make note of the new Gateway's MAC address located on a square sticker (look under the bar code). It has 12 digits, grouped in 6 pairs separated by dashes.

1. **Install the new Gateway.**

   Use the installation instructions WI1674. Ceiling installations are typical.

2. **Open DL-Windows.**

   In the main screen, click the **Open** button and the Account "white space" opens at the left, listing all Accounts. Double-click the Account name into which you want to add this new Gateway.

3. **Open the Gateway Configuration screen.**

   Click the **GW Confg** button to open the **Gateway Configuration** screen.

4. **Discover the new Gateway.**

   Click the **Discover New Gateways And Auto Add to Account** button. A **Discover New Gateways** popup appears; click **Yes** and DL-Windows searches the network; when the new Gateway is found, it is listed in the grid shown in the **Gateway Configuration Screen**. Verify the MAC address on the screen matches the MAC address on the sticker inside the Gateway.

   Note that this "**Discover New Gateways And Auto Add to Account**" button combines two actions--the

"discovering the Gateway(s)" action, and the "adding the Gateway(s) to the current Account" action.

Now that the new Gateway is added to the Account in DL-Windows, you can use this new Gateway to discover locks that have been (or will be) physically installed on doors.

Resetting the Gateway

"Resetting" the Gateway clears all memory and ensures that any residual voltage or test data existing from the factory is cleared from the unit. Always reset the Gateway for new installations; you can also reset the Gateway anytime after the Gateway is powered. Two levels of reset exist, a "**Partial**" reset and "**Full**" reset, as follows:

"**Partial Reset**" clears the Gateway's "Lock Config Table"; but if the Gateway was previously programmed for wireless network communication, this reset leaves the Gateway in this "wireless" condition. *With power applied to the Gateway, press and hold the "***RESET***" button and the red light turns on continuously; continue to hold the button and the red light will start to flicker. Release the button and the red light will continue to flicker*. The Gateway is now "Partially Reset".

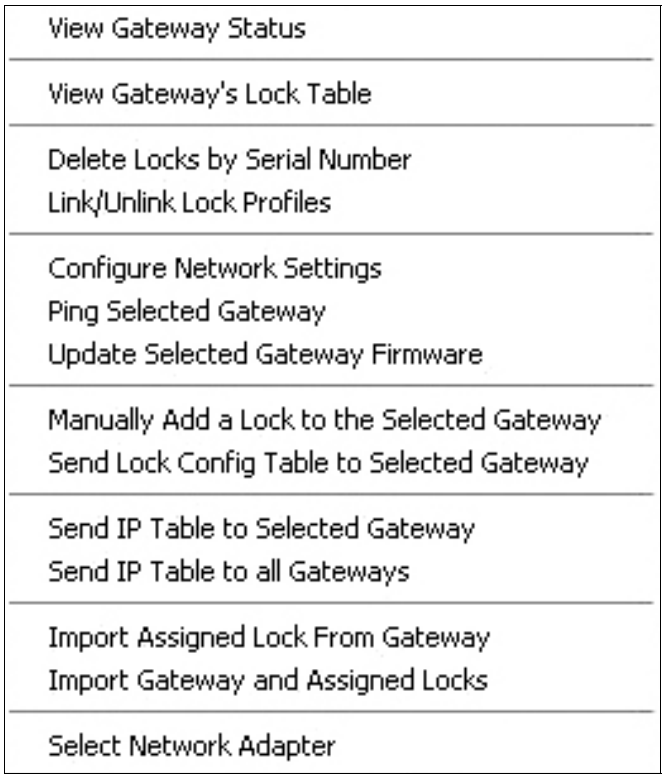
"**Full Reset**" returns the Gateway to its factory condition, clearing the Gateway's "Lock Config Table" and resets the network selections to its factory default "wired" condition. Continuing from the "Partial Reset" instructions above, with the red light flickering without any buttons being pressed...

*...With the red light flickering, press and hold the "***RESET***" button again and the red light turns on continuously...continue to hold the button and the red light will start to flicker...continue to hold the button until the red light turns on continuously...then release the button and the red light turns off...after a few seconds the red light will then start to flicker.* The Gateway is now "Fully Reset".

Menus

DL-Windows provides several menus throughout its screens. These menus can be accessed by right-clicking certain items, or by simply clicking the menu bars located at the top of the application's window. Several of the menus are pictured below; it may be helpful to create a "test" Account in DL-Windows and open these menus as you read this guide.

TOOLS MENU (PAGE 29)



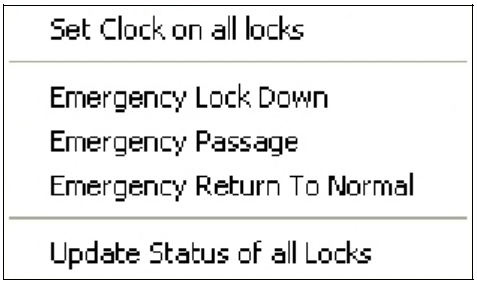
GATEWAY CONFIGURATION SCREEN, TOOLS MENU

ACTIONS MENU (PAGE 40)



GATEWAY CONFIGURATION SCREEN, ACTIONS MENU

WIRELESS COMMANDS MENU (PAGE 49)



DL-WINDOWS MAIN SCREEN, WIRELESS COMMANDS MENU

RIGHT-CLICK PROFILE MENU (PAGE 55)



RIGHT-CLICK A PROFILE

"GW Confg" Button



Click the **GW Confg** button to open the **Gateway Configuration** screen.
The **Gateway Configuration** screen allows you to seek out new Gateway devices and add them to a specific Account; similarly, locks can be discovered and added to Gateways.

Menu Bar

Exit

Tools

- View Gateway Status (see page 29)
- View Gateway's Lock Table (see page 30)
- Delete Locks by Serial Number (see page 31)
- Link / Unlink Lock Profiles (see page 32)
- Configure Network Settings (see page 33)
- Ping Selected Gateway (see page 35)
- Update Selected Gateway Firmware (see page 35)
- Manually Add a Lock to the Selected Gateway (see page 36)
- Send Lock Config Table to Selected Gateway (see page 37)
- Send IP Table to Selected Gateway (see page 37)
- Send IP Table to all Gateways (see page 37)
- Import Assigned Lock From Gateway (see page 38)
- Import Gateway and Assigned Locks (see page 38)
- Select Network Adapter (see page 39)

Actions

- Add Gateway to Account (see page 40)
- Remove Gateway from Account (see page 41)
- Locate All Locks on Gateway (see page 42)
- Discover Locks on Selected Gateway (see page 43)
- Discover New Gateways (see page 44)
- Relocate Gateways (Displayed in red) (see page 45)
- Replace Gateway with new one (see page 46)

Help

- View Color Codes (see page 47)

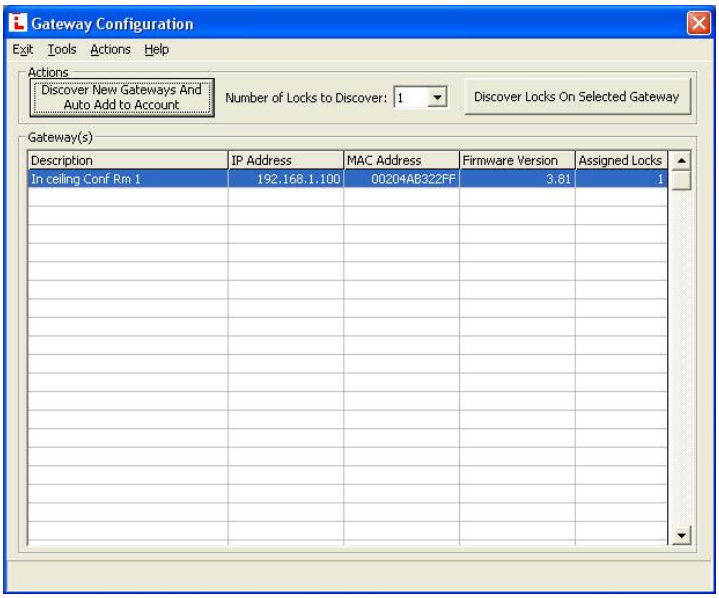
Discover New Gateways and Auto Add to Account

This button combines two activities--the "discovery" process and the "add to an Account" process--in one button. Be sure the Gateway is mounted, powered and connected to the router (or the network); be sure to press the "**RESET**" button on the PC board before the Gateway housing cover is secured (go to page 25 and follow the "**Resetting the Gateway**" instructions for a "**Partial Reset**"). In DL-Windows, click this button and the **Discover New Gateways** popup appears, shown below. The Gateways that are found on the network are then automatically added to the current Account and listed in the **Gateway Configuration** screen grid.



Description

Text name of the Gateway, as specified when the Gateway was added to DL-Windows using the **Add Gateway to Account** screen (click **Actions**, **Add Gateway to Account**).



IP Address

Specifies the IP Address on the TCP/IP network currently assigned to the Gateway. Required for communication.

MAC Address

A unique serial number burned into Gateway memory that identifies that Gateway from all others. Inside the Gateway housing, the MAC address is located on a square sticker (look under the bar code) and has 12 digits, grouped in 6 pairs separated by dashes.

Firmware Version

Indicates the firmware source code edition currently residing in the Gateway.

Assigned Locks

Indicates the total number of locks assigned to the selected Gateway's database.

Number of Locks to Discover

Discover Locks on Selected Gateway

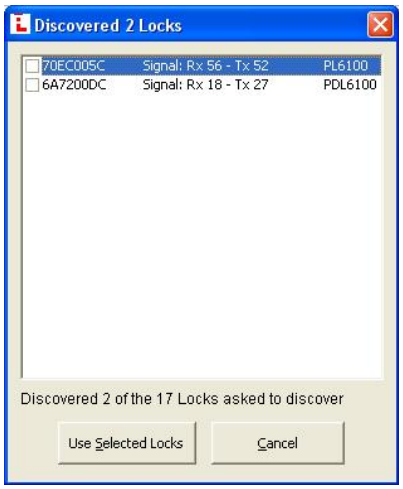
Use both to add locks to a Gateway. First, click to select an existing Gateway in the grid to which you want to assign the installed locks, then select the number of locks the system will try to find in the **Number of Locks to Discover** pull-

down list. The Gateway selected will transmit the discovery request radio signal to the locks in the vicinity. Only those locks within range that have not already been configured will respond.

Note: The maximum search time allowed for each discovery request is 1 minute. To minimize the search waiting time, this screen allows you to limit the search to a certain quantity of installed locks. In addition, you can manually stop the discovery process at any time by pressing the **Esc** key on the keyboard. If you know the number of installed locks to be discovered, select that number and the discovery process will stop the moment that number of locks are found. If the number of locks selected exceeds the actual number physically installed, the discovery process will continue for either a maximum of 1 minute or until the **Esc** key is pressed.

Example: If the number selected is 10, but in fact only 8 locks exist, the system may find all 8 locks, but will keep searching for 10 until the one minute timeout duration expires--or until the **Esc** key is pressed.

Click the **Discover Locks On Selected Gateway** button to initiate the search.



The "**Discovered Locks**" popup displays the search results. In the example shown above, the popup screen entitled "**Discovered 1 Locks**" appears, indicating the serial number of the lock(s), the signal strength and the lock model(s). **Note:** The number displayed in the title bar will reflect the number of discovered locks.

To assign the discovered physical lock(s) to the selected Gateway, click the check box next to each lock and click **Use Selected Locks**; to exit without assigning, click **Cancel**.

Link Locks (Popup)

After the discovered physical lock(s) are assigned to the selected Gateway and **Use Selected Locks** is clicked, the system requests if you wish to "Link" the discovered physical locks to a "virtual lock" Profile. Click **Yes** to proceed or click **No** to exit without linking.



Lock Configuration Error (Popup)

This popup appears after a failed attempt to assign discovered physical locks to a Gateway.

As detailed previously, the **Gateway Configuration** screen allows you to discover physical locks and assign them to a specific Gateway (click the **Discover Locks On Selected Gateway** button). The "**Discovered Locks**" popup appears and lock(s) you wish to assign to the Gateway are selected.

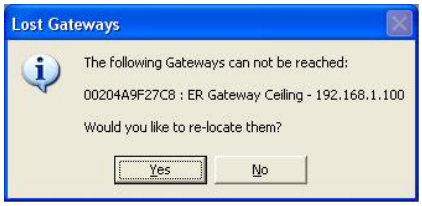
When the **Use Selected Locks** button is clicked, the Gateway sends "configuration data" to the selected locks. This "configuration data" contains items (an internal lock designation, a specific radio channel and security data) all embedded in what is referred to as the "Lock Table". This "configuration data" instructs the physical lock(s) to communicate ONLY with that Gateway and prevents other Gateways from communicating with the lock(s).

If after several attempts to communicate with the lock(s), the Gateway still does not receive confirmation that this "configuration data" was received from the selected lock(s) successfully, this popup appears. In short, the Gateway was unable to "configure" the selected physical locks, and thus was unable to assign the selected physical locks to the Gateway.



Lost Gateways (Popup)

This popup appears if the connection between DL-Windows and the Gateway is lost or is not working properly. Click **Yes** to attempt to reconnect to the specified Gateway.



Lock already exists (Popup)

This popup appears if you attempt to use a selected lock in the "**Discovered Locks**" popup that already exists in the Lock Table of the selected Gateway. Click **OK** to attempt to reconfigure by re-sending the "Lock Config Table" to the selected Gateway.



Tools > View Gateway Status



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **View Gateway Status**.

The **Gateway Status** screen displays the operational status of the selected Gateway as of the last update.

Gateway Description

Text name of the Gateway, as specified when the Gateway was added to DL-Windows using the **Add Gateway to Account** screen (click **Actions**, **Add Gateway to Account**).

Gateway IP Address

Specifies the static IP Address on the TCP/IP network currently assigned to the Gateway. Required for communication.

Gateway Firmware Ver

Indicates the firmware source code edition currently residing in the Gateway.

Firmware Update

Indicates the result of the last Gateway firmware upgrade process. "Good" signifies that the last firmware upgrade was completed without errors. If "Bad", upgrade the firmware as follows: Click the **GW Confg** button to open the **Gateway Configuration** screen; click to highlight a Gateway in the list, then click **Tools**, **Update Selected Gateway Firmware**.

The system checked the integrity of the firmware, burned it into the Gateway memory, rebooted the Gateway and verified the Gateway is functioning properly.

Security Code

The Account Security Code is first specified when the Account is created in DL-Windows; this Security Code is then copied to the Gateway firmware when the Gateway is first added to the Account.
This field indicates the status of the Security Code by comparing the Security Code in the Gateway with the Security Code in DL-Windows; if Codes are not identical, the field indicates "Mismatch", thus disabling DL-Windows-to-Gateway communications.

Lock Communication Error

Indicates if locks associated with the selected Gateway fail to communicate with that Gateway.
If an error is indicated, open the **Gateway Configuration** screen, click **Tools**, **View Gateway's Lock Table** to determine which lock generated the error.



Gateway Status

An overall state or condition of the Gateway. Displays either "**Ready**" to indicate a normal condition; "**Lock Down**" if an Emergency Lock Down Command was sent; and "**Passage**" if an Emergency Passage Command was sent.

Last Updated

Indicates the date and time the current **Gateway Status** screen was changed with new elements of data.

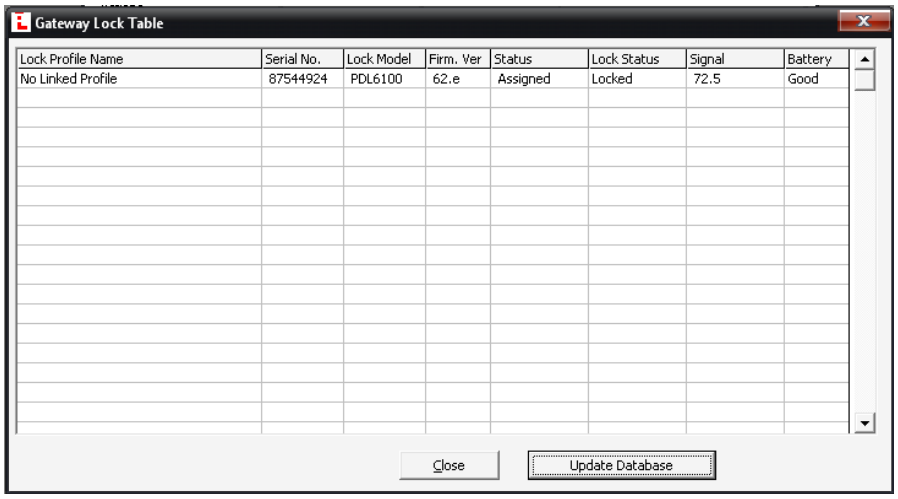
Update Status

Click to delete all existing data elements appearing in this screen and request new data be generated based on the current condition of the Gateway.

Tools > View Gateway's Lock Table



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **View Gateway's Lock Table**.



Use the **Gateway Lock Table** screen to see which locks are assigned to the selected Gateway.

The act of "configuring" a Gateway means to assign (add) discovered physical locks to the Gateway. DL-Windows sends a "Lock Config Table" to that Gateway; the Gateway then sends this "configuration data" to the selected physical locks. This "configuration data" contains items--an internal lock designation, a specific radio channel and security data--that are all embedded in what is called a "Lock Config Table". This "configuration data" instructs the physical lock(s) to communicate ONLY with that Gateway and prevents other Gateways from communicating with the physical lock(s). Configuring ensures a fixed wireless communication channel exists between selected physical locks and a selected Gateway. If you want to see which locks are assigned to the selected Gateway, this is the option to use.

Lock Name

Text name of the lock Profile, as specified when the lock was added to DL-Windows using the **New Lock** screen.

Serial No.

Displays the lock's unique serial number assigned and programmed into the lock firmware at the factory. Each Networx™ lock is identified in the system by this unique serial number.

Lock Model

Specifies the style of Trilogy Networx™ series door lock, such as "PDL6100", "DL6100" or "PL6100" (including other model types that may be developed in the future).

Firm. Ver

Identifies the specific edition or release of the current lock's Trilogy Networx™ firmware. The firmware is stored in memory chips that are located inside each lock.

Status

Indicates whether the physical lock is currently "assigned" or "unassigned" to a lock Profile.

Lock Status

Indicates whether the physical lock is currently locked, unlocked, in Emergency Passage ("Passage") or In Emergency Lock Down ("In Lock Down"). To set Emergency Passage or Emergency Lock Down, see the **Emergency Commands** menu on page 49.

Signal

Indicates the radio transmission strength, as measured between the Gateway and the lock; a higher number (closer to 100) indicates a stronger signal.

Battery

Indicates if the strength of the total battery voltage is sufficient to power the lock firmware, radio and electromechanical parts located inside the lock.
Note: For battery replacement instructions, see "**BATTERY REPLACEMENT**" in WI1674.

Update Database (button)

Click this button to command DL-Windows to re-send the "Lock Config Table" to the selected Gateway.

Tools > Delete Locks by Serial Number



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Delete Locks by Serial Number**.

Use the **Delete Serial Number(s)** screen to remove selected lock serial numbers from a Gateway.

Note: All locks on all Gateways in the Account are listed in this screen; multiple locks can be removed from multiple Gateways. Check all check boxes to select the lock(s) to be removed.

Delete Serial Number(s) Main Screen

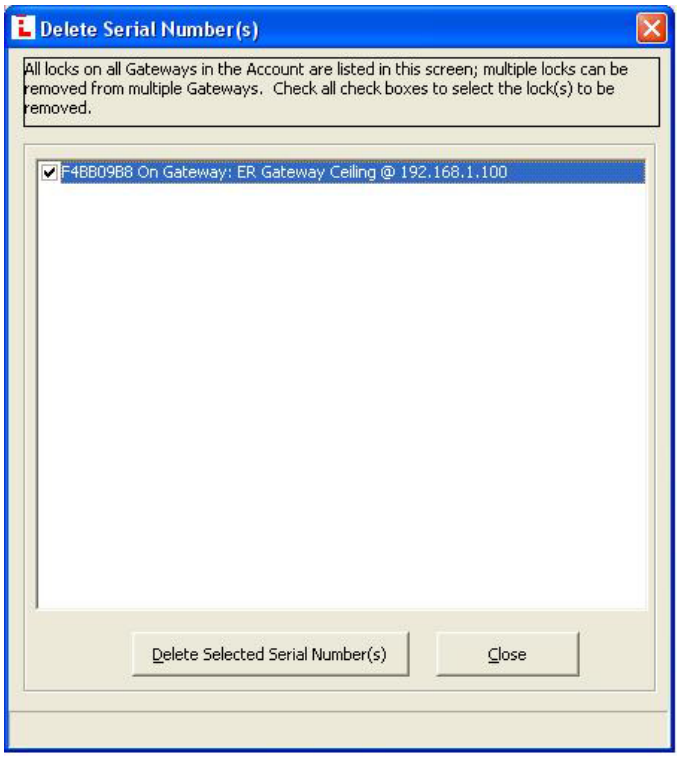
This screen lists all physical locks and their assigned Gateways in the Account.

Each physical lock is represented by its unique serial number; each Gateway is represented by its name and IP address.

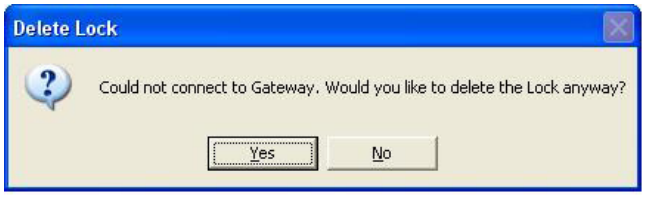
Check all check boxes to select the locks to be removed, then click the **Delete Selected Serial Number(s)** button to delete the selected locks (or click the **Close** button to cancel without deleting).

Before removing the lock serial numbers, a confirmation **Remove Serial Numbers** popup appears; click **OK** to permanently delete the physical lock serial numbers selected.

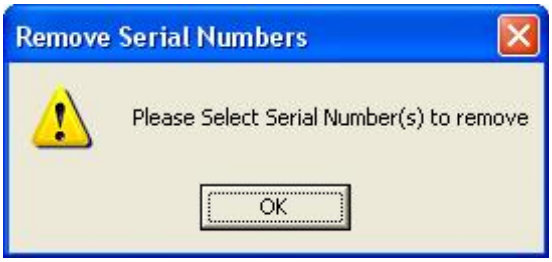




Delete Lock Popup
If the Gateway is unable to communicate with the physical lock, an **Delete Lock** popup appears, informing you that although DL-Windows is currently unable to communicate with the Gateway(s), the lock serial number may still be removed from the DL-Windows database. To delete the lock, click **Yes**, to exit without deleting, click **No**.



Remove Serial Numbers Popup
If you forgot to check any locks and clicked the **Delete Selected Serial Number(s)** button, the following popup appears:



Click **OK** and try again.

Tools > Link / Unlink Lock Profiles



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Link/Unlink Lock Profiles**. **Note:** This screen will automatically open after discovering locks on a Gateway (see the **Discover Locks on Selected Gateway** button in the **Gateway Configuration** screen).

In DL-Windows, the word "Link" is used to describe the specific action of associating a "virtual lock" Profile to the serial number of the physical lock installed on a door. These "virtual lock" Profiles are created in DL-Windows and are used to simulate the "real" locks installed in the premises. These Profiles contain the instructions that a real lock uses to perform its various functions (such as User Codes, Features, Time Zones and Schedules). These instructions are essentially database files that are stored inside the lock memory circuitry.

Available Lock Profiles

Displays existing lock Profiles in the current Account. Click to highlight a lock Profile you wish to link to a "real" lock. The lock Profiles listed here are the same that were created in the "white box area" of the main DL-Windows screen "Account Tree area". See "**CONFIGURING DL-WINDOWS FOR WIRELESS USE**" earlier in this guide.

Available Lock(s) By Serial Number

Displays the lock serial numbers of all "real" locks discovered by all Gateways in the current Account. All lock serial numbers are unique and assigned to the physical lock at the factory.

Link Lock

Click this button to link the highlighted Profile (in the **Available Lock Profiles** field) with a "real" lock serial number (in the **Available Lock(s) By Serial Number** field).

LockID

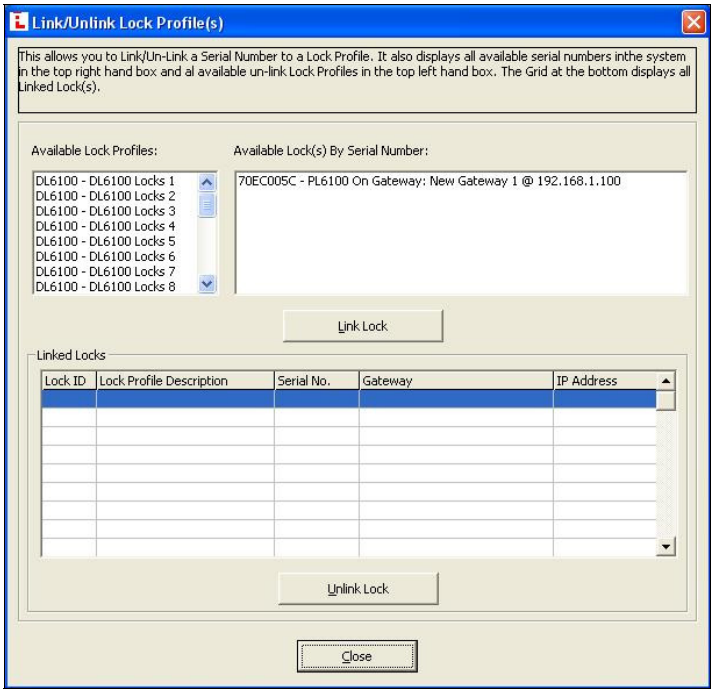
Displays a number assigned to a virtual lock when the virtual lock is created within an Account. **Note:** Only linked locks in the current Account are listed here.
For more information about LockID numbers and how they are used within DL-Windows, see the "LockID" glossary entry in the DL-Windows V3.6.0 User's Guide (OI237).

Lock Profile Description

Displays the text name of the virtual lock Profile when the Profile was created. **Note:** Profiles are created in the **New Lock Profile** dialog; the text name of the Profile is typed in the **Enter New Lock Profile Description** field.

Serial No.

Displays the lock's unique serial number assigned and programmed into the lock firmware at the factory. Each Networx™ lock is identified in the system by this unique serial number.



Gateway

Displays the name of the Gateway to which the linked locks are assigned.

IP Address

Displays the IP address of the Gateway to which the linked locks are assigned.

Unlink Lock

First select a linked lock listed in the grid, then click this button to break the link between the "lock Profile" and the "real" lock serial number. After unlinking, the "lock Profile" will return to the **Available Lock Profiles** field and the "real" lock serial number will return to the **Available Lock(s) By Serial Number** field, both ready to be re-linked.

Tools > Configure Network Settings



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Configure Network Settings**.

The **Network Configuration** screen displays the various networking attributes required for the *selected* Gateway to work correctly within the current wireless network. See your network administrator for more information if needed.
Note: For wireless security, because the communications between the network/router and the Gateway conform to the AES (Advanced Encryption Standard), we recommend leaving the system unsecure, but to use MAC address filtering within the router software (if your router supports MAC Address filtering). Using this kind of security is easier to setup and more secure than using the security protocols (encryption methods) shown within this screen.

Use DHCP

Use DHCP (Dynamic Host Configuration Protocol) is enabled by default. When checked and **Save Configuration** is clicked, DL-Windows allows the selected Gateway to accept the dynamic assignment of an IP address by the TCP/IP network. Check **Use DHCP** to remove the need to manually assign a static (fixed) IP address to the Gateway (*note that Emergency Commands will **NOT** work*). Uncheck **Use DHCP** to allow the manual assignment of a static IP address to the selected Gateway (a warning popup appears [shown on page 8] warning that the Gateway may be unreachable until it is installed on the correct network or is manually defaulted). See your network administrator for additional information.

DHCP Name

To aid in locating the Gateway on the network, specify a name to describe the domain name (host name) of the corresponding IP Address assigned to the selected Gateway. The DHCP name entered here will be used for the DNS configuration.

Wireless Mode

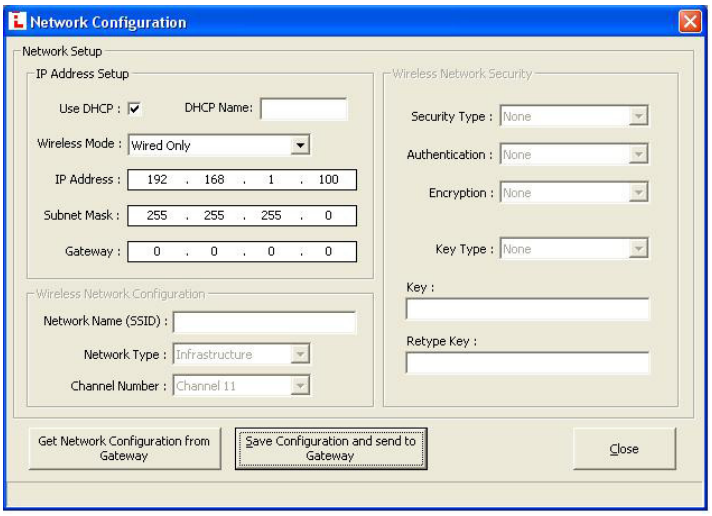
Configures the selected Gateway for either wireless or wired communication with the computer network. Select either **Wired Only** or **Wireless Only** from this pull-down menu. If **Wireless Only** is selected, the **Wireless Network** fields located in this screen become active and available for selection.

IP Address

If the **Use DHCP** (see above) is unchecked, this field allows the IP address to be manually assigned to the selected Gateway.

Subnet Mask

To improve performance, network administrators determine how best to divide their network. Create more hosts and fewer subnets or more subnets and fewer hosts? The IP protocol makes use of a Subnet Mask to more efficiently route packets to their correct network destinations. When a Gateway receives a data packet, the Subnet Mask indicates how many bits of the packet's destination address are to be used for routing and which bits are to be "masked" (ignored). **Use DHCP** (see above) must be unchecked before data can be entered into this field. This information must be obtained from your network administrator.



Default Gateway

This field is the IP address of the physical device, such as a router, for the current subnet to which you want to be connected. This field is not to be confused with the IP address of the Alarm Lock Gateway device installed in the system. **Use DHCP** (see above) must be unchecked before typing the IP address. This information must be obtained from your network administrator.

Network Name (SSID)

The Gateway module acts as an interface between a computer network and the Networx™ wireless locks. Of the two Gateway models available ("Wired" or "Wireless/Wired"), the "Wireless/Wired" Gateway model supports connection to a network using the 802.11 standard. This field allows you to specify the SSID (Service Set IDentifier) name assigned to the wireless Wi-Fi (802.11) network. All "Wireless/Wired" Gateway models in a system must use this name to allow for network communication. **Note:** This field is case-sensitive and can be up to 32 bytes in length. In addition, the **Wireless Mode** pull-down menu in this screen must be set to ***Wireless Only*** for this field to become active.

Network Type

Click this pull-down menu to select the network communication mode. With "**Infrastructure**" selected, the Gateways communicate to a wired LAN via access points. With "**Ad Hoc**" selected, the Gateways can communicate directly in a peer-to-peer fashion. Contact your network administrator for more information.

(continued)

Channel Number

Click this pull-down menu to manually specify the number (1-11) of the carrier frequency (subchannel pathway) between the selected Gateway and the wireless Wi-Fi (802.11) network. Contact your network administrator for more information.

Security Type

For the selected Gateway, click the pull-down menu to specify the 802.11 security protocol (encryption method) to be used when the selected Gateway is connected to the wireless network. The selections are as follows:

WEP (Wired Equivalent Privacy) The WEP encryption method was designed to provide wireless networks with the "equivalent" security available in traditional wired "landline" networks.

WPA (Wi-Fi Protected Access) A security protocol from the Wi-Fi alliance for 802.11 wireless networks. It uses the Temporal Key Integrity Protocol (TKIP) to provide stronger encryption than the earlier WEP (Wired Equivalent Privacy) method. Derived from, and a subset of, the IEEE 802.11i security standard, WPA includes 802.1x authentication.

WPA2 Supports additional security features of the IEEE 802.11i standard that are not already included in the WPA security protocol.

Note: For each Security Type selected, different choices appear for the other fields in the **Wireless Network Security** area of this screen.

Authentication

Verifies the origin of transmitted data.

For the selected Gateway, click the pull-down menu to specify the 802.11 authentication protocol to be used when the selected Gateway is connected to the wireless network.

When **WEP Security Type** is selected, the options for the selected Gateway are:

- **Open/None**: Requires no Authentication for the data transmissions between the selected Gateway and DL-Windows.
- **Shared**: Requires a shared symmetric numeric code (encryption "key") for all data transmissions between DL-Windows and the Gateway.

When **WPA** or **WPA2 Security Type** is selected, the option is:

- **Pre-Shared Key (PSK)**: Requires a numeric code (encryption "key") *previously shared* between DL-Windows and the Gateway using a secure channel for all data transmissions.

Encryption

The reversible transformation of data from its original format into a concealed format as a process for securing its accessibility, authenticity and integrity. Encryption uses an encryption algorithm (sequence) and one or more encryption keys (numeric codes).

When **WEP Security Type** is selected, the options for the selected Gateway are:

- **64 bits**: Although the 64-bit WEP data encryption method uses a five-character key size (forty bits or five bytes) for symmetric encryption, plus an additional 24 factory-set bits, this method represents a relatively low level of security.
- **128 bits**: Stronger than 64-bit WEP, 128-bit WEP uses a string of 26 hexadecimal characters (0-9 and A-F), each representing four bits of the key.

When **WPA Security Type** is selected, the option for the selected Gateway is:

- **TKIP**: (Temporal Key Integrity Protocol), a security protocol algorithm that compliments WEP encryption with increased security measures such as extended key lengths and data integrity checks.

When **WPA2 Security Type** is selected, the options for the selected Gateway are:

- **CCMP**: (Counter Mode with Cipher Block Chaining Message Authentication Code Protocol) improves upon both WEP and TKIP. CCMP is a required option for Robust Security Network (RSN) compliant networks.
- **TKIP**: See above.

Key Type

A "key" is a numeric code used to encrypt data, and is used to secure the data traffic between the DL-Windows, the Gateways and the locks. The key "type" can be a password, a passphrase, or a hexadecimal string like '45D3 E454 3523 EDC2'. To ease encryption key entry, a password or passphrase can be entered instead of the cryptic hexadecimal characters.

Key

Retype Key

Type your key in the **Key** field, and re-type in the **Retype Key** field to confirm it.

Get Network Configuration from Gateway

Retrieves the current settings of the Gateway and displays these settings in this screen.

Save Configuration

Click **Save Configuration** to save your settings and close the screen, or click **Close** to exit without saving.

Tools > Ping Selected Gateway



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Ping Selected Gateway**.

The **Ping** (Packet INternet Groper) network utility is used to test whether the IP address of the Gateway is available on the network for immediate use. Ping sends a packet out on the network and waits for a response; the result of the ping is indicated in the status bar located at the bottom of the **Gateway Configuration** screen. A successful test displays the IP address of the Gateway with the word "**Found**"; an unsuccessful test displays "**Not Found**".

Tools > Update Selected Gateway Firmware



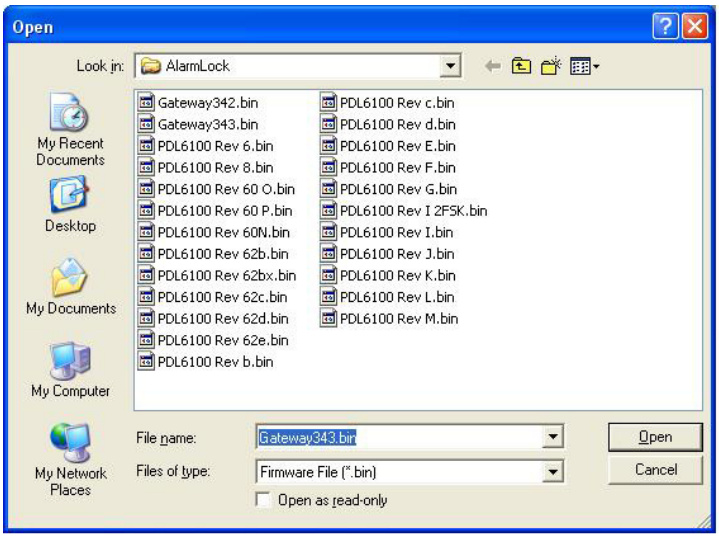
To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Update Selected Gateway Firmware**.

Allows the updating of the Gateway firmware.

The standard Windows **Open** dialog box appears (shown at right), allowing you to browse for the binary ".bin" file containing the firmware update.

Once the file is selected (highlighted), click **Open** to initiate the update process.

Note: The image shown at right displays both lock firmware and Gateway firmware ".bin" files in the same directory. Be sure the file selected in the **File name** field is of the correct type before initiating the update process.



Tools > Manually Add a Lock to the Selected Gateway



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Manually Add a Lock to the Selected Gateway**.

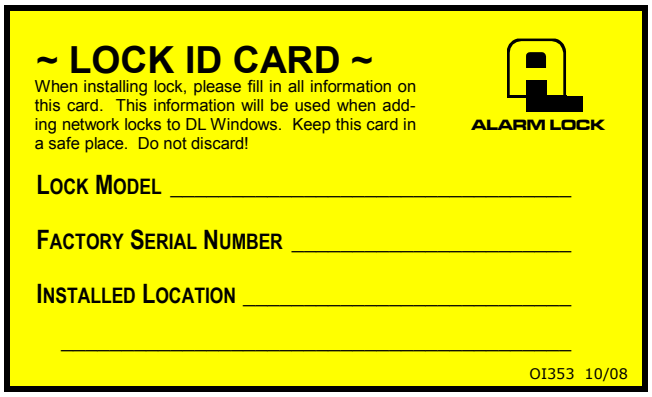
Use the **Add Lock Serial Number** screen to *manually* add a specific lock serial number to a selected Gateway.

This screen is typically used when removing a broken lock from a door (and adding a new lock), or when moving a lock from one Gateway to another Gateway. Type all characters of the serial number, **do not include dashes or spaces**.

Lock Serial Number

Carefully type the lock's unique factory serial number located on the lock housing.

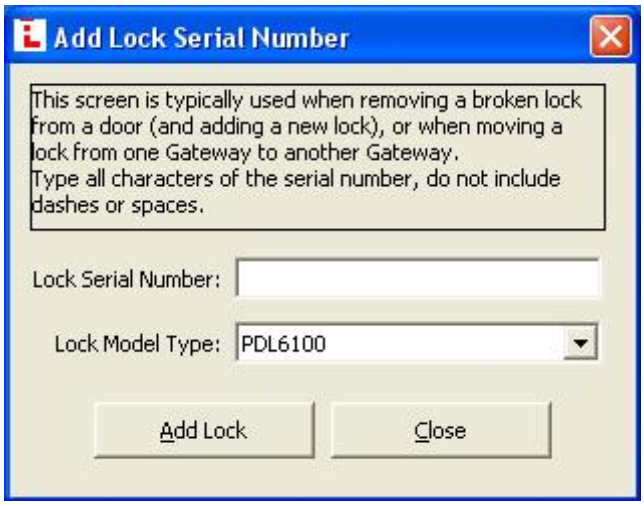
We recommend that when installing the lock on the door a yellow-colored "Lock ID Card" (see the "**SAVE THIS LOCK ID CARD**" image) be completed. These Lock ID Cards are a useful way to organize lock information, including lock serial numbers.



SAVE THIS LOCK ID CARD

Lock Model Type

Click the **Lock Model Type** pull-down and highlight the wireless lock model ("DL6100", "PDL6100", etc.).



Add Lock

Close

Click **Add Lock** to assign ("add") the specified lock serial number to the selected Gateway and close the screen, or click **Close** to exit without adding.

Tools > Send Lock Config Table to Selected Gateway



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Send Lock Config Table to Selected Gateway**.

In DL-Windows, the word "**Configure**" has a specific meaning--to "Configure" is to "assign" discovered physical locks to a Gateway, thus ensuring a fixed wireless communication channel exists between selected physical locks and a selected Gateway.

How does the system "Configure"?
The Gateway sends "configuration data" in the form of a "Lock Configuration Table" to the selected locks. This "configuration data" contains items--an internal lock designation, a specific radio channel and security data--that are all embedded in the "Lock Configuration Table". This "configuration data" instructs the physical lock(s) to communicate ONLY with that Gateway and prevents other Gateways from communicating with the physical lock(s).
In short, the Gateway tries to "configure" the selected physical locks, assigning the selected physical locks to the Gateway.

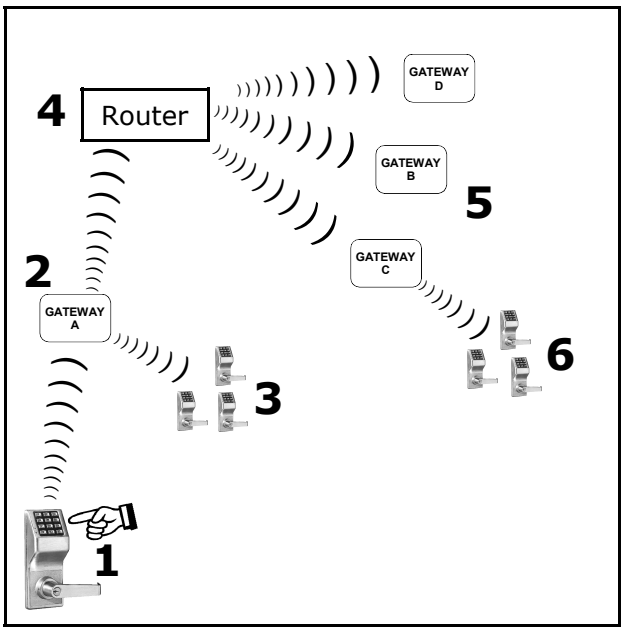
Tools > Send IP Table to Selected Gateway

Tools > Send IP Table to all Gateways



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Tools**, **Send IP Table to Selected Gateway**. You can also click **Send IP Table to all Gateways** to send the IP Table to ALL Gateways without the need to highlight a specific Gateway.

For Accounts with multiple Gateways that are programmed to respond to Emergency Commands (see pages 51-53) these menu items are a preliminary step to ensure that selected Gateways are able to communicate with each other without the need for DL-Windows to be connected to the system. To allow this communication between Gateways, each Gateway in the Account must possess the static IP Address of every other Gateway in the Account. Use these DL-Windows menu items to manually distribute the static IP addresses of each Gateway (in the form of a DL-Windows "IP Table") to either a "selected" Gateway or to "all" other Gateways in the Account. The diagram at left illustrates how Emergency Commands are distributed: Pressing an Emergency code at a lock keypad (step 1) causes the keypad to send the Emergency Command to its assigned Gateway (named "Gateway A" in step 2). This "Gateway A" sends the Emergency Command to all locks assigned to "Gateway A" (step 3) and also "Gateway A" sends the same Emergency Command to each Gateway IP address listed in its "IP Table" via the Router (step 4). With each Gateway receiving the Emergency Command from "Gateway A" (step 5), each of these Gateways then sends this Emergency Command to each of its assigned locks (step 6). Notice that DL-Windows is not needed to disseminate Emergency Commands and therefore not shown in this diagram.



HOW EMERGENCY COMMANDS ARE DISSEMINATED TO ALL GATEWAYS AND LOCKS IN AN ACCOUNT

Important: When adding a new Gateway to an Account, be sure use the **Send IP Table to all Gateways** Command to ensure all existing Gateways in the Account have the IP Address of the new Gateway. All Emergency Commands MUST be tested weekly (or daily if necessary) to ensure their correct operation. **Note:** These menu items are only used when more than one Gateway exists in a system.

- **For systems with only one Gateway**, that Gateway can operate with either a static IP address or the dynamic assignment of an IP address by the TCP/IP network (if you wish, "**Use DHCP**" can be checked in the **Network Configuration** screen; see **"Tools > Configure Network Settings**" on page 33). Since only one Gateway exists in the system, that Gateway obviously does not need to maintain the IP addresses of other non-existent Gateways. Therefore, systems with only one Gateway do not require the use of these menu items.
- **For systems with more than one Gateway**, *static IP addresses* (listed within the DL-Windows "IP Table") *MUST be distributed and assigned to all Gateways within the system.* After all locks are installed and working, and static IP addresses are assigned to each of the Gateways, click **Tools** > **Send IP Table to Selected Gateway** (or click **Tools** > **Send IP Table to all Gateways**) to distribute these Gateway IP addresses to each Gateway in the system.

Tools > Import Assigned Lock From Gateway

Tools > Import Gateway and Assigned Locks



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click:

- **Tools**, **Import Assigned Lock From Gateway**

When the Account information stored in DL-Windows is lost (such as with a stolen laptop)--AND--the DL-Windows backup files are either non-existent, inadequate or lost, the above "Import" options can be used to rebuild an existing wireless system using the data stored inside the onboard memory of the installed Gateway device(s).

Although these two options might never be used, their existence highlights the *vital* importance of maintaining safe, secure and up-to-date DL-Windows backup files. The short period of time it takes to back up your files may save HOURS of tedium trying to re-create and re-build your system.

Backup your Accounts

On the DL-Windows main screen, click **Tools**, **Backup Accounts**, and the **Backup Accounts** dialog opens, allowing you to select where DL-Windows will copy all Account database files; click to select an existing "Backup" folder (or check the **Create New Folder** checkbox to generate and name a new folder). To restore your data, simply copy and paste the backup files into C:\DL-Windows.



BACKUP ACCOUNTS SCREEN

Restoring Data without Backups

If no backups were made for an existing wireless system and the Account information stored in DL-Windows is lost, the basic procedure is as follows:

1. Re-install the DL-Windows software.
2. Re-create the Account and all assigned lock Profiles. In addition, the **Global Users** screen will need to be re-populated with all Users.
3. Click the **GW Confg** button, and a popup appears:



Click **OK** to close the popup, then on the DL-Windows main screen, click **Tools**, **Set Security Password**, and the **Set Security Password** dialog appears:



SET SECURITY PASSWORD DIALOG

In the **Set Security Password** dialog, enter the original "Security Password" used in the original Account, then click **OK** to save.

Important: "Security Passwords" are used to differentiate between separate wireless Accounts. Do **NOT** share passwords between Accounts, otherwise the radio signals of separate Accounts can become intermixed. Be sure you record--in writing--all Account passwords in a safe location; once set, passwords are NOT retrievable from DL-Windows!

4. Click the **GW Confg** button to open the **Gateway Configuration** screen.
5. Click **Actions**, **Discover New Gateways**. The Gateway(s) appear in the **Gateway Configuration** screen in green colored text.
6. Click to highlight a specific green-colored Gateway in the list.
7. Click **Tools**, **Import Gateway and Assigned Locks** to bring in the Gateway settings and all lock serial number data assigned to that Gateway.
8. In the **Gateway Configuration** screen, click **Tools**, **Link / Unlink Lock Profiles**.
9. In the **Link / Unlink Lock Profiles** screen, the lock serial numbers will be listed in the **Available Lock(s) By Serial Number** field, available to be re-linked. After linking, a **Send Profile to Lock Now** popup automatically appears requesting if you wish to send the lock Profiles to the physical lock(s).

Tools > Select Network Adapter



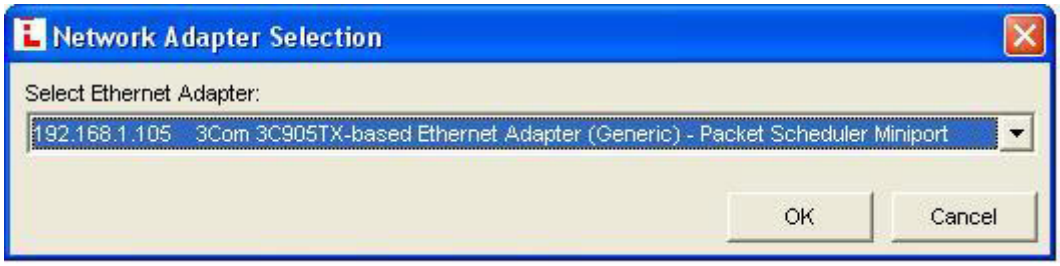
To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click **Tools**, **Select Network Adapter**.

The **Network Adapter Selection** screen allows you to identify the Ethernet "network interface card" (NIC) you are using inside your computer to communicate with the Gateway devices in your system. Some computers have a printed circuit board that plugs into the motherboard, other computers have the network adapter (Ethernet) built into the motherboard, thus precluding the need for a separate Ethernet card. Remember, the router or corporate Ethernet network is connected to this Ethernet adapter with an Ethernet cable (RJ-45 plug).

Select Ethernet Adapter

Click the pull-down menu to select the network card used in the computer.

Click **OK** to save the selection or **Cancel** to exit without saving. **Note:** Clicking **OK** in this dialog saves the selection *only for the duration of the current DL-Windows session*. Quitting and restarting DL-Windows may require re-opening this dialog and re-selecting the network adapter.



Actions > Add Gateway to Account

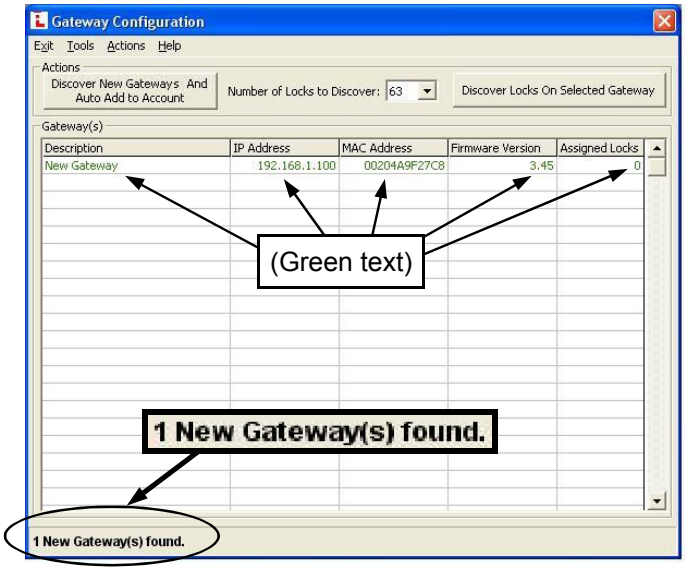


To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Actions**, **Add Gateway to Account**.

Select this option to add discovered Gateways to a current Account. This option is only used for Gateways already "discovered" but not yet assigned to an Account. Therefore, before using this option, you must first "discover" the Gateway on the network with the **Actions**, **Discover New Gateways** menu item. **Note:** If Gateways have already been discovered, skip to step 2.

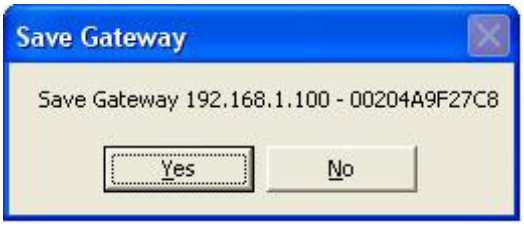
1. Click **Actions**, **Discover New Gateways**.

   Gateways that are found on the network are listed in the **Gateway Configuration** screen grid--in green text--each with the **Description** name "New Gateway".



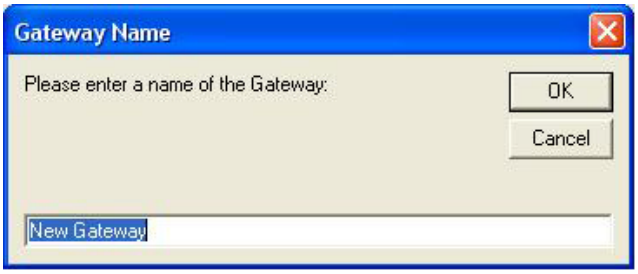
   Note: The bottom of the **Gateway Configuration** screen indicates the number of new Gateway(s) found (see image above).

2. Click to select a Gateway, then click **Actions**, **Add Gateway to Account**. The **Save Gateway** confirmation popup appears:



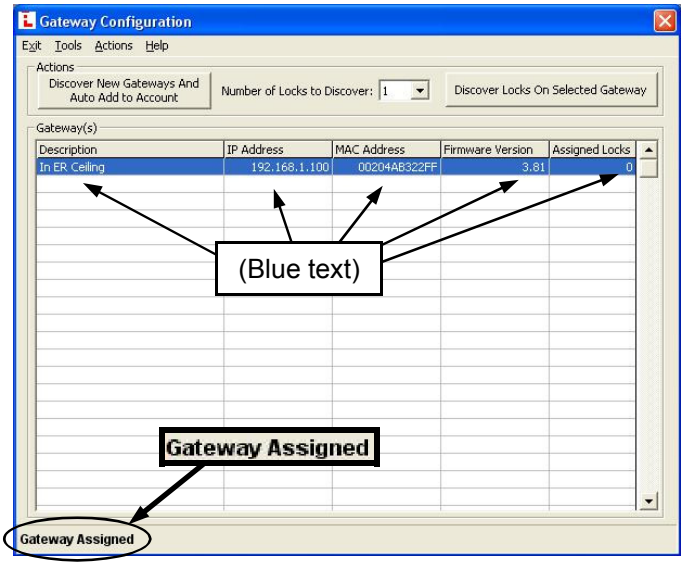
   The popup references the Gateway IP address and its serial number. Click **Yes** to add the Gateway, or click **No** to exit without saving.

Upon clicking **Yes**, the **Gateway Name** popup appears, prompting you to change the default Gateway Description name of "New Gateway", if you wish.



Click **OK** to save, or **Cancel** to exit without changing the default name of the Gateway. You can always change the name of the Gateway by double-clicking the Gateway listed in the **Gateway Configuration** screen grid (this popup will appear).

When the **Gateway Name** popup closes, the **Gateway Configuration** screen grid remains open, displaying the Gateway, now assigned ("added") to the Account.



Notice the text at the bottom of the **Gateway Configuration** screen now reads "**Gateway Assigned**" (see image above).

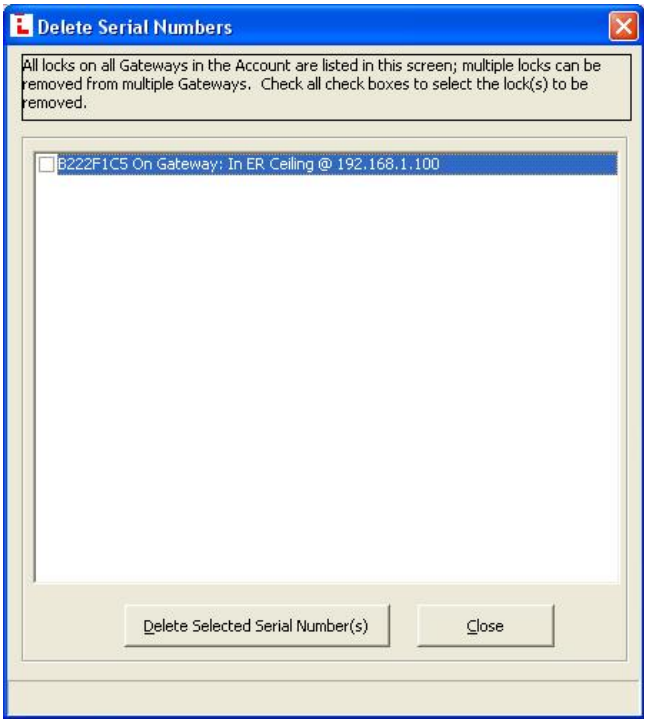
Actions > Remove Gateway from Account



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Actions**, **Remove Gateway from Account**.

Before the Gateway can be removed from the Account, *any locks already assigned to the selected Gateway must first be deleted ("un-assigned") from that Gateway*.
Note: If all locks have already been deleted from the Gateway, skip to step 2.

1. First remove any assigned locks from the Gateway. Click **Tools**, **Delete Locks by Serial Number**.



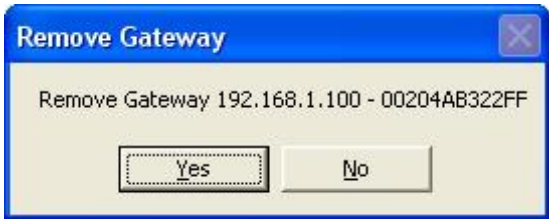
The **Delete Serial Number(s)** screen lists all locks and their assigned Gateways in the Account.

Each lock is represented by its unique serial number; each Gateway is represented by its name and IP address.

Check all check boxes to select the locks to be removed from the Gateway you wish to remove from the Account. Click the **Delete Selected Serial Number(s)** button to delete the selected locks.

IMPORTANT: Double-check each serial number selected to be sure they are the locks assigned to the Gateway(s) you wish to remove.

2. With all locks removed from the Gateway, click **Actions**, **Remove Gateway from Account**. The **Remove Gateway** popup appears, indicating the IP address and serial number of the Gateway to be removed.



Click **Yes** to delete or **No** to exit without deleting the Gateway.

Note: If you forget to check any check boxes, the following popup will appear to remind you:



Click **OK** and try again.

Actions > Locate All Locks on Gateway



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Actions**, **Locate All Locks on Gateway**.

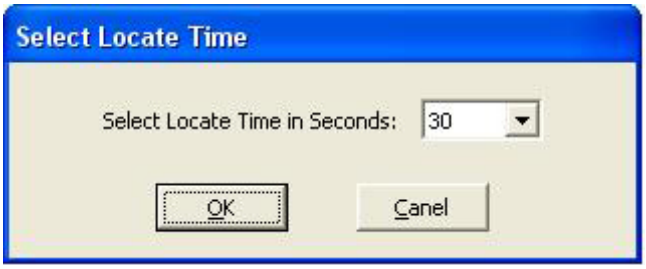
This option requests all wireless locks assigned to the selected Gateway to beep and flash their red LED's; used when you wish to find the physical locks or to confirm the wireless connection is operational. Click this selection and the **Select Locate Time** popup appears:

Select Locate Time in Seconds

Click the pull-down menu to select the *Locate Time* in seconds. Up to 255 seconds (4 minutes 15 seconds) can be selected; default duration is 30 seconds.

Click **OK**, and all wireless locks assigned to the selected Gateway will beep and flash their red LED's for the selected duration.

Click **Cancel** to exit without requesting this action.

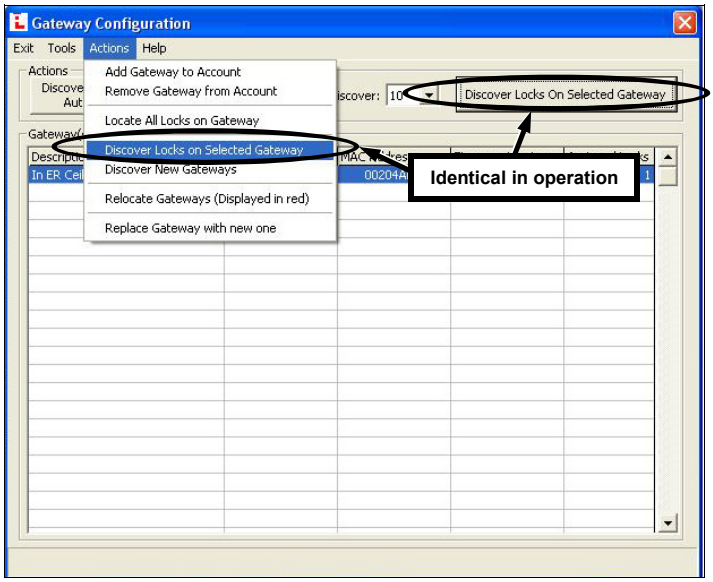


Actions > Discover Locks on Selected Gateway



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Actions**, **Discover Locks on Selected Gateway**.

This option is **identical** in operation to the **Discover Locks on Selected Gateway** button found in the **Gateway Configuration** screen.



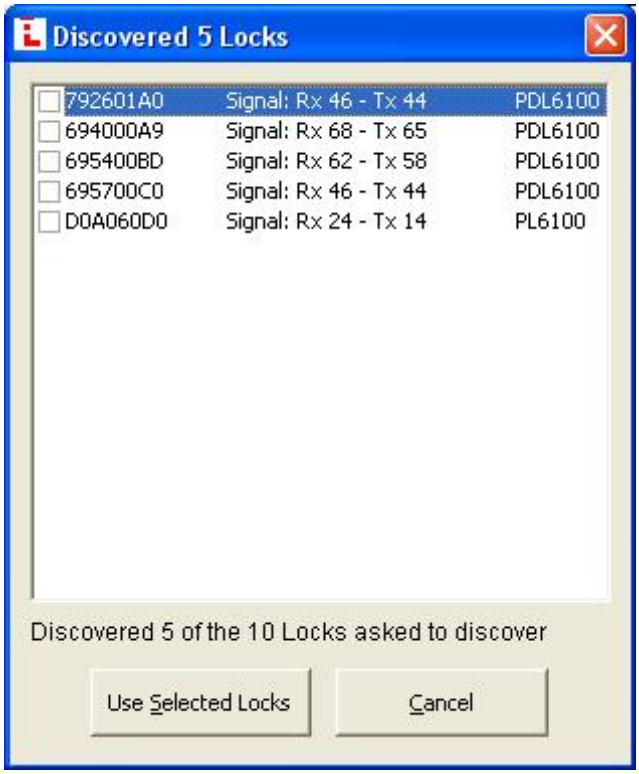
Discover Locks on Selected Gateway

First, in the **Gateway Configuration** screen, click to select an existing Gateway in the grid to which you want to assign the installed locks, then select the number of locks the system will try to find in the **Number of Locks to Discover** pull-down list. The Gateway selected will transmit the discovery request radio signal to the locks in the vicinity. Only those locks within range that have not already been configured (i.e. assigned to Gateways) will respond.

Note: The maximum search time allowed for each discovery request is 1 minute. To minimize the search waiting time, this screen allows you to limit the search to a certain quantity of installed locks. In addition, you can manually stop the discovery process at any time by pressing the **Esc** key on your computer keyboard. If you know the number of installed locks to be discovered, select that number and the discovery process will stop the moment that number of locks are found. If the number of locks selected exceeds the actual number physically installed, the discovery process will continue for either a maximum of 1 minute or until the **Esc** key is pressed.

Example: If the number selected is 10, but in fact only 8 locks exist, the system may find all 8 locks, but will keep searching for 10 until the one minute timeout duration expires--or until the **Esc** key is pressed.

The "**Discovered Locks**" popup displays the search results. In the example shown above, the popup screen entitled "**Discovered 5 Locks**" appears, indicating the serial number



of the lock(s), the signal strength and the lock model(s). **Note:** The number displayed in the title bar will reflect the number of discovered locks.
To assign the discovered physical lock(s) to the selected Gateway, click the check box next to each lock and click **Use Selected Locks**; to exit without assigning, click **Cancel**.

Actions > Discover New Gateways



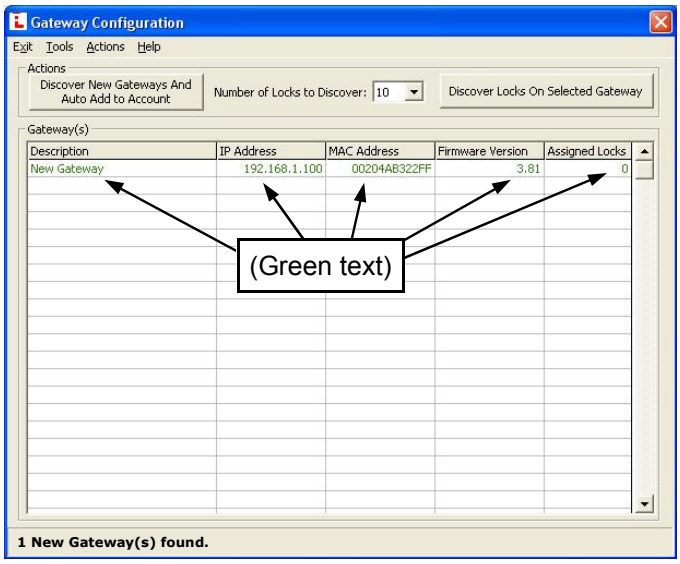
To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click **Actions**, **Discover New Gateways**.

The **Discover New Gateways** selection attempts to discover new Gateway devices on the network; Gateway devices that are not yet discovered will be listed in the **Gateway Configuration** screen, but will be listed in green colored text, indicating that although the Gateway device was discovered, it has yet to be added to an Account in DL-Windows. To add this discovered Gateway to a particular Account, open the Account in DL-Windows, then click **Actions**, **Add Gateway to Account**.

Select this option to discover the Gateways on the network. **Note:** If Gateways have already been discovered, skip to step 2.

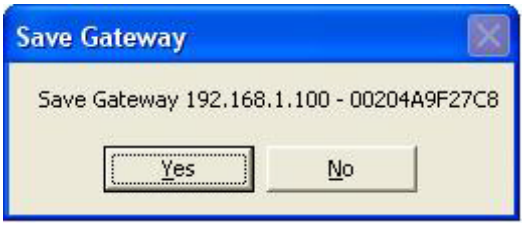
1. Click **Actions**, **Discover New Gateways**.

   Gateways that are found on the network are listed in the **Gateway Configuration** screen grid--in green text--each with the **Description** name "New Gateway".



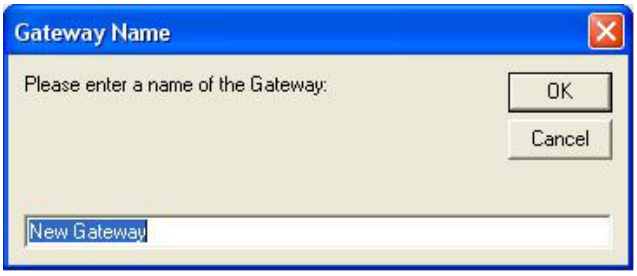
   Note: The bottom of the **Gateway Configuration** screen indicates the number of new Gateway(s) found.

2. Click to select a Gateway, then click **Actions**, **Add Gateway to Account**. The **Save Gateway** confirmation popup appears:



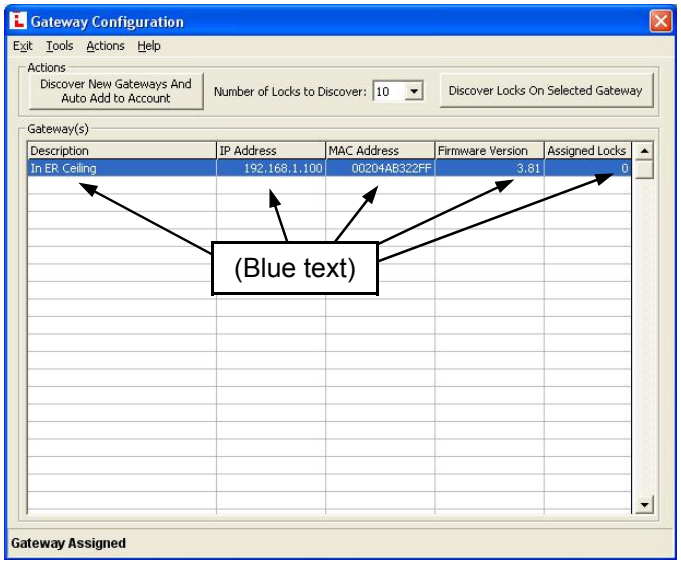
   The popup references the Gateway IP address and its serial number. Click **Yes** to add the Gateway, or click **No** to exit without saving.

Upon clicking **Yes**, the **Gateway Name** popup appears, prompting you to change the default Gateway Description name of "New Gateway", if you wish.



Click **OK** to save, or **Cancel** to exit without changing the default name of the Gateway. You can always change the name of the Gateway by double-clicking the Gateway listed in the **Gateway Configuration** screen grid (this popup will appear).

When the **Gateway Name** popup closes, the **Gateway Configuration** screen grid remains open, displaying the Gateway, now assigned ("added") to the Account. Notice the text at the bottom of the **Gateway Configuration** screen now reads "**Gateway Assigned**".



Actions > Relocate Gateways (Displayed in red)



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Actions**, **Relocate Gateways (Displayed in red)**.

A working Gateway (discovered on the network, assigned to an Account and operational) is listed in the **Gateway Configuration** screen in ***blue*** colored text. When a working Gateway has subsequently lost communication with the network and the **Gateway Configuration** screen is opened, the Gateway appears listed in ***red*** colored text.

If you see a Gateway listed in red, either the network or the physical Gateway device is responsible. Click to select the red colored Gateway in the list, then click **Actions**, **Relocate Gateways (Displayed in red)** to try to re-discover the problem Gateway through the network.

If you see a Gateway listed in red, try the following:

1. Check the network. Re-fresh the **Gateway Configuration** screen by closing and re-opening. If other Gateways exist in the Account and are listed in blue-colored text, this indicates that part of the network is still operational. You may need to contact your network administrator to assist in finding the source of the network problem.

2. Check your physical connections to the GW device.

   - The RJ-45 socket on the Gateway contains two LED's; the green LED should be lit continually when the RJ-45 plug is inserted and properly connected. The yellow LED flickers when data is being send to or from the Gateway. If these two LED's are not functioning, you can suspect the problem lies with the RJ-45 cable or the network. Try replacing the RJ-45 cable.
   - If the RJ-45 socket LED's are operational, remove the Gateway housing cover and power down and power up the Gateway by removing and replacing the power wires at the Gateway power terminals. Press the "**RESET**" button on the Gateway PC board to clear the Gateway memory (turn to page 25 and follow the "**Resetting the Gateway**" instructions for a "**Full Reset**").

3. If the network and the physical connections are found to be in working order, the Gateway device itself may need to be replaced. Open the Gateway housing cover on the new Gateway device (it may be helpful to make note of the new Gateway's MAC address located on a square sticker--the MAC address is located under the bar code and has 12 digits, grouped in 6 pairs separated by dashes). Disconnect the power wires and the RJ-45 plug from the old Gateway and reconnect all wires to the new Gateway. Continue with the **Actions**, **Replace Gateway with new one** procedures on the next page.

Actions > Replace Gateway with new one



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Actions**, **Replace Gateway with new one**.

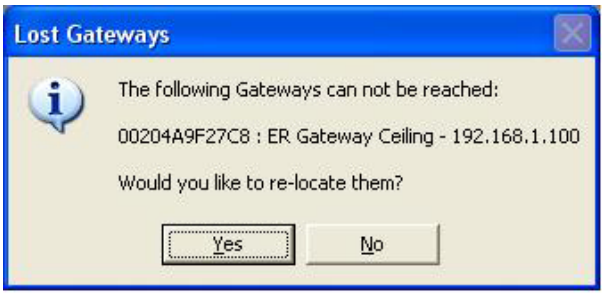
This option is used when a working Gateway device (discovered on the network, assigned to an Account and operational with physical locks assigned) becomes faulty and needs to be physically replaced.

Before replacing the Gateway device (or devices), be sure you check the network and the Gateway connections outlined in the **Actions**, **Relocate Gateways (Displayed in red)** on the previous page.

Physically replace the Gateway device by disconnecting the power wires and the RJ-45 plug from the old device and reconnecting all wires to the new device. Remember to press the "**RESET**" button on the new Gateway PC board to clear the Gateway memory (turn to page 25 and follow the "**Resetting the Gateway**" instructions for a "**Full Reset**").

Open DL-Windows and proceed as follows:

1. Click the **GW Confg** button to open the **Gateway Configuration** screen. The following screen appears:



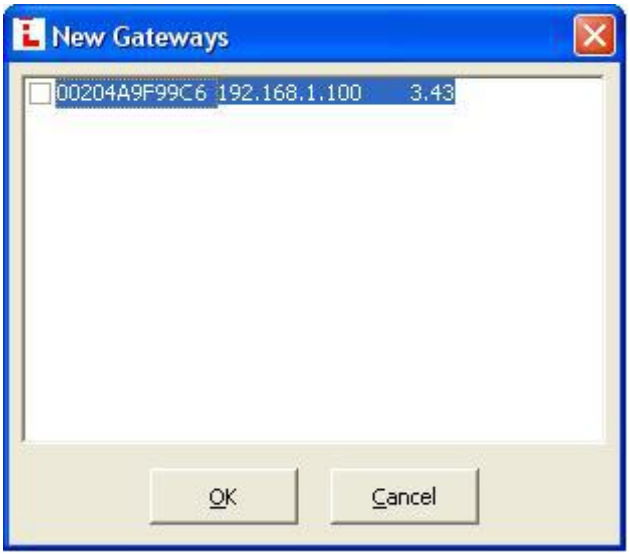
   You can click **Yes** and have the system automatically re-locate the new Gateway; in this example we will try to locate the Gateway manually. Therefore, click **No** and the **Gateway Configuration** screen will open.

2. In the **Gateway Configuration** screen, click to highlight the red-colored Gateway in the list corresponding to the physically replaced Gateway device. Click **Actions**, **Replace Gateway with new one**.
   Note: The **Gateway Configuration** screen automatically highlights the first listed Gateway, thus its red-colored text may not immediately be apparent; click to highlight another Gateway or empty row to view the color of the text.

3. DL-Windows will try to discover the newly installed Gateway device on the network. If the system is unable to find the new Gateway, a popup will appear indicating that no new Gateways were found. If this popup appears, click **OK** to close the popup and repeat step 2.



4. If the system finds the newly installed Gateway, the **New Gateways** dialog appears, indicating the MAC address, IP address and the firmware version of the newly installed Gateway device:



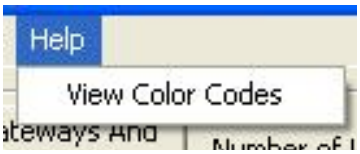
5. Click the check box to select the Gateway and click **OK**. The system will automatically replace the old Gateway with the new Gateway, copying all needed information (lock table, etc.) into the new Gateway device.

IMPORTANT: *Be sure to remove power from the old Gateway.*

Help > View Color Codes



To open this screen, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight a specific Gateway in the list, then click **Help**, **View Color Codes**.



The Gateway Configuration screen displays Gateway devices in different colors, each color indicating the operational status of the Gateway as of the last communication with DL-Windows.

Assigned Gateway (Blue)

Indicates the Gateway has been discovered on the network successfully assigned to an existing Account within DL-Windows, and is available on the network for immediate use. **Note:** This Gateway may or may not have physical locks assigned (may or may not have a Lock Table assigned)



Newly Found Gateway (Green)

Indicates a Gateway has been discovered on the network, but has not been added to an existing Account within DL-Windows.

Assigned but can't be reached (Red)

Indicates the Gateway has, in the past, been discovered on the network, assigned to an existing Account within DL-Windows, was available on the network for use, and may (or may not) have physical locks assigned--but is currently not reachable on the network.

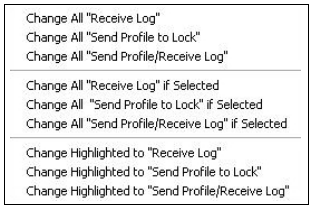
Wireless Locks Screen



The **Wireless Locks** screen is used to make it easier to transfer data directly to or from **multiple** wireless locks. Similar to the **DTM 3 Support** screen used to configure the Data Transfer Module, the **Wireless Locks** screen bypasses the need for a DTM and communicates directly with single or multiple wireless locks.

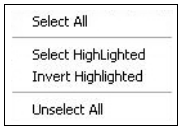
✓ Quick Tips

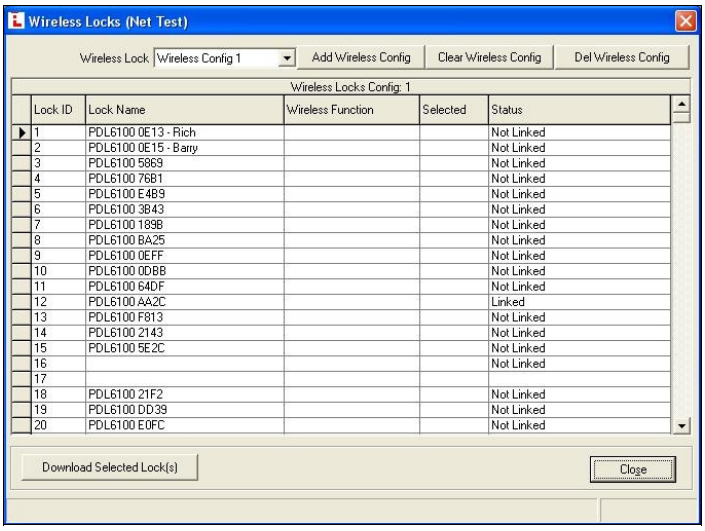
Right-click the "**Wireless Function**" column, and select the desired action:



✓ Quick Tips

Right-click on the "**Selected**" column, select desired action.





Wireless Lock (pull-down)

The selections you made in this screen can be saved as a "Wireless Config". Click this pull-down list to select and re-display your saved "Wireless Config" when needed.

Add Wireless Config

Click this button to save the new selections you made in this screen to a new "Wireless Config".

Clear Wireless Config

Click to clear all selections made in this screen.

Del Wireless Config

Click to delete a saved "Wireless Config".

Lock ID

A number representing an individual lock within an Account.

Lock Name

Displays the name entered when the lock was first added to the DL-Windows Account.

Wireless Function (pull down)

Click a cell in this column to select a function to perform when communicating with the lock, as follows:

- **Send Profile to Lock** (transfers lock Profile to the physical lock memory)
- **Receive Log** (transfers event log data from the physical lock into DL-Windows for display)
- **Send Profile - Receive Log** (combines the previous two).

Download Selected Lock(s) (button)

Click to initiate wireless communication.

Close (button)

Click to close the screen.

Wireless Function (right-click menu)

(See "**✓ Quick Tips**" window, above left). To save time, right-click the "**Wireless Function**" column; the desired action can be selected as follows:

- **"Change All…"** (selects action for all physical locks in the Account)
- **"Change All...if Selected"** (selects action for all physical locks checked with a "✓" in the "**Selected**" column)
- **"Change Highlighted to…"** (selects action for all highlighted rows)

Selected (column)

DL-Windows will perform the operation(s) selected in the **Wireless Function** column for all "checked" locks. To "check" a specific lock, double-click in this column--for the desired Lock ID number--and a "✓" appears in that cell.

Selected (right-click menu)

(See "**✓ Quick Tips**" window, above left). To save time, right-click the "**Selected**" column; the desired action can be selected as follows:

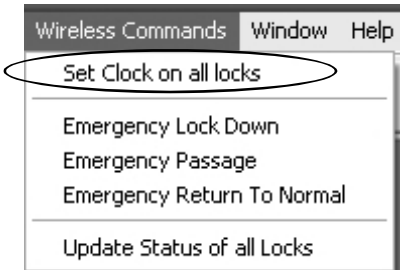
- **"Select All"** (adds a check "✓" to all locks in the Account)
- **"Select Highlighted"** (adds a check "✓" to all highlighted rows)
- **"Invert Highlighted"** (removes a check "✓" from all highlighted rows)
- **"Unselect All"** (removes a check "✓" from all locks in the Account)

Status (column)

Indicates the "real time" status of the communication, "Communicating with Lock", "Waiting for Download", "Communication Completed", "Not Linked", etc.

Note: If "Not Linked" is displayed, click the **GW Confg** button to open the **Gateway Configuration** screen, then click **Tools**, **Link/Unlink Lock Profile(s)**.

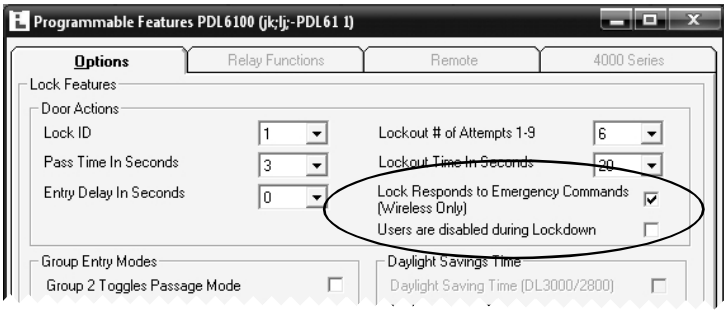
Wireless Commands > Set Clock on all Locks



DL-WINDOWS MAIN SCREEN, WIRELESS COMMANDS MENU

On the DL-Windows main screen, click **Wireless Commands**, **Set Clock on all Locks** to retrieve the current time and date from the computer running DL-Windows for distribution to all Gateways and all physical wireless locks in the current Account.

EMERGENCY COMMANDS



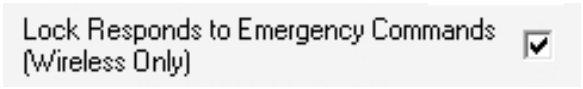
Three "Emergency Commands" are available in the wireless Trilogy Networx™ system:

- "**Emergency Lock Down**", to lock all doors in the system
- "**Emergency Passage**", to unlock all doors in the system
- "**Return to normal**", to exit emergency Commands

These "Emergency" Commands can be **initiated** at **any Networx** wireless lock keypad --or-- from DL-Windows via the **Wireless Commands** menu. The "Emergency" Commands in the **Wireless Commands** menu are detailed on pages 51-53; in addition, see the steps on page 8, **ASSIGNING STATIC IP ADDRESSES TO GATEWAYS**, and also familiarize yourself with the TOOLS menu and its ability to send the IP Table to selected (or all) Gateways on page 37. For more information regarding which buttons to press to initiate these keypad "Emergency" Commands, see the keypad Programming Instructions for the keypad in use. **Note:** DL-Windows does not need to be running to allow these "Emergency" Commands to be initiated.
Important: All Emergency Commands MUST be tested weekly (or daily if necessary) to ensure their correct operation.

Lock Responds to Emergency Commands

*All **Networx** locks are programmed at the factory to **respond to*** and ***allow the initiation of** these "Emergency" Commands*.
DL-Windows DOES allow you to program a specific lock (or locks) to ***ignore*** Emergency Commands. In DL-Windows, click the **Feat** button to open the **Programmable Features** dialog, ***Options*** tab, then un-check the **Lock Responds to Emergency Commands** checkbox (default is checked).



Terminology Overview

Some Users have the *ability* to initiate Emergency Commands, and others do not. Some Users have the *ability* to unlock a lock during an Emergency Lockdown, and others do not. Before describing the details of these special abilities, a short primer on certain terminology is warranted. See the **Terminology** section in the DL-Windows User Guide (OI237) for a detailed description of the terms "User Codes" and "User Numbers". In short:

User Codes are numbers a User presses into the lock keypad to unlock a lock. The ***location*** of these User Codes within the lock programming is referred to as a **User Number** (called a "**Slot**" in DL-Windows) and defines the programming abilities of that User Code (and thus defines the programming abilities of that User).

Schedules are events (recorded lock activities) that are assigned to occur automatically at specific times. In DL-Windows, use the "**Schedule - TimeZone**" screen to first create an individual block of time called a "**TimeZone**" (for example, "9AM to noon weekdays"). A **TimeZone** is then linked to an event to make a **Schedule** (for example, "unlock between 9AM and noon weekdays").

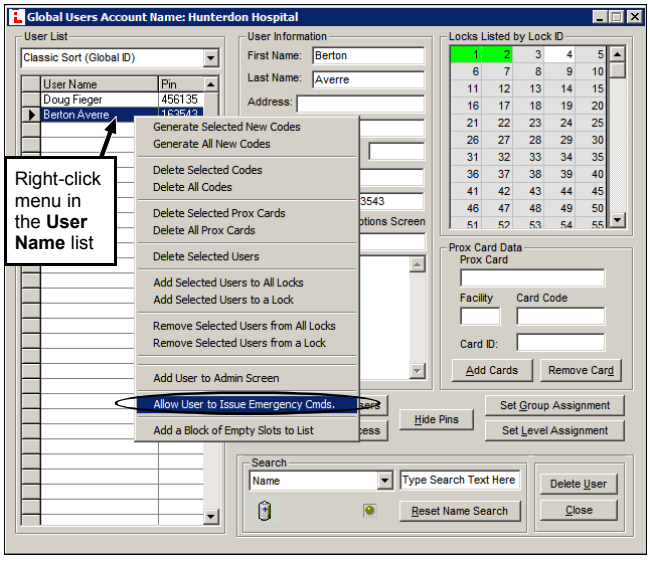
Who can Initiate Emergency Commands?

By default, DL-Windows programs User Numbers 1-9 to automatically have the ability to initiate Emergency Commands. In addition, any other User Number (10+) can be manually added to a special "**Emergency Users**" list to allow them the ability to initiate Emergency Commands.

Add an Emergency User

To manually add a User to this special "**Emergency Users**" list, open the DL-Windows **Global Users** screen. Click to

highlight a User in the **User Name** list, then right-click the User to open the menu as shown. Click "**Allow User to Issue Emergency Cmds.**".



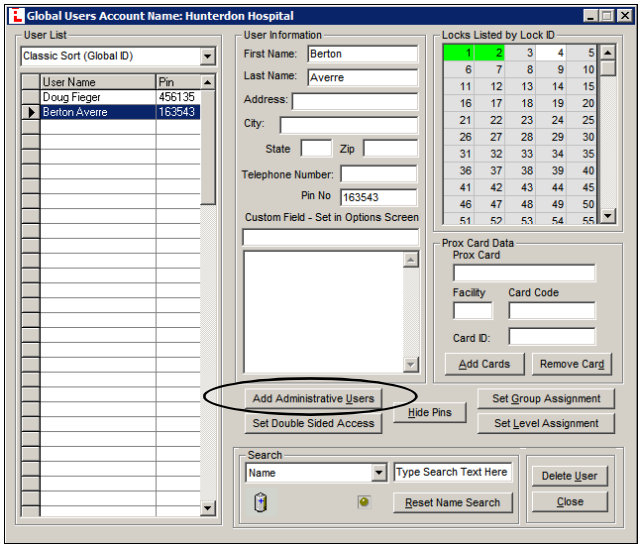
"USER NAME" RIGHT-CLICK MENU

If the User is successfully added to the "**Emergency Users**" list, the following popup will appear:



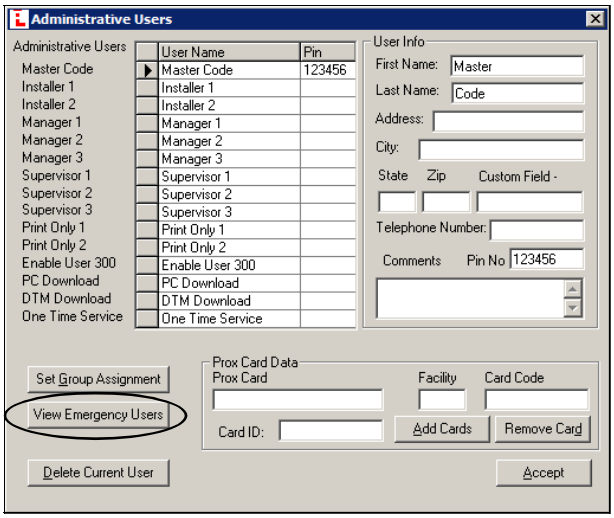
Delete an Emergency User

To delete a User from the "**Emergency Users**" list, open the **Global Users** screen and click the **Add Administrative Users** button (shown circled in the image below):



"ADD ADMINISTRATIVE USERS" BUTTON

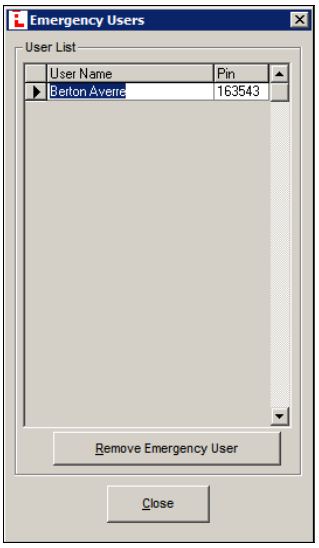
The **Administrative Users** screen opens:



"VIEW EMERGENCY USERS" BUTTON

In the **Administrative Users** screen, click the **View Emergency Users** button (see image above) and the **Emergency Users** screen opens (see image at right). Click to highlight a User, then click the **Remove Emergency User** button to delete the Emergency User. When removed, the following popup will appear:





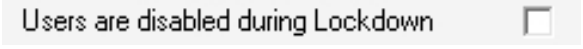
Note: Users that are disabled by a Schedule or by any other means cannot initiate Emergency Commands, even if they are added to the "**Emergency Users**" list.

Who has Access during Emergency Lock Down?

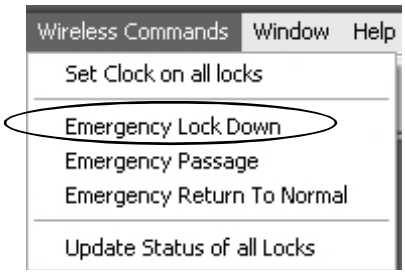
By default, all User Codes are disabled during **Emergency Lock Down**, with the following exceptions:

- By default, User Numbers 1-9 and all Users listed in the **Emergency Users** list are able to unlock a lock during **Emergency Lock Down**. **Note:** All Users (excluding the Master Code) that are disabled by an existing **Schedule** will ***also*** be disabled during **Emergency Lock Down**.

To enable access for all Users (including the Master Code) during **Emergency Lock Down**, open DL-Windows and click the **Feat** button to open the **Programmable Features** dialog, ***Options*** tab. Uncheck the **Users are disabled during Lock Down** checkbox (default is checked).



Wireless Commands > Emergency Lock Down



DL-WINDOWS MAIN SCREEN, WIRELESS COMMANDS MENU

On the DL-Windows main screen, click **Wireless Commands**, **Emergency Lock Down** to lock all wireless locks in the current Account.

IMPORTANT: Threats such as fire emergencies, bomb threats or the release of hazardous substances within a protected premises may require an "Emergency Passage" Command to allow for a facility evacuation.

Other threats such as terrorist attacks, hostile intruder situations, the outdoor release of hazardous substances, tornado emergencies and other life-threatening events, may require an "Emergency Lock Down" - the opposite of a facility evacuation.

It is strongly advised that all facilities develop separate Emergency Lock Down and Emergency Passage procedures appropriate for the specific premises, and these Emergency procedures be frequently practiced and continually refined.

The **Emergency Lock Down** Command locks (secures) all wireless physical locks within the current Account.

An **Emergency Lock Down** Command sent to a lock in any of the following modes…

- **Normal** mode ("non-Emergency")
- **Emergency Passage** mode
- **Passage** mode (via keypad Function 45)

...overrides any of these existing modes and places the lock in **Emergency Lock Down**, locking the lock(s).

IMPORTANT: Once in **Emergency Lock Down**, the wireless physical lock(s) may be placed in Passage mode manually (using keypad Function 48). In addition, when the lock is in an "**Emergency**" state, all User Codes are disabled at the keypad except for User Code #1 (the Master Code) and User Codes 2 through 9 (assuming the "**Users are disabled during Lockdown**" check box in the **Programmable Features** screen, ***Options*** tab is checked).



Emergency View Screen

Click **Wireless Commands**, **Emergency Lock Down** and the DL-Windows main screen flashes a yellow and red "**Lock Down**" warning located at the bottom of the screen. The **Emergency View** screen appears, displaying all Gateways in the current Account, their descriptions (names and IP addresses) and real-time status.

Note: The **Emergency View** screen is a reference screen only; if closed or minimized, the system will continue to process the requested Command(s).

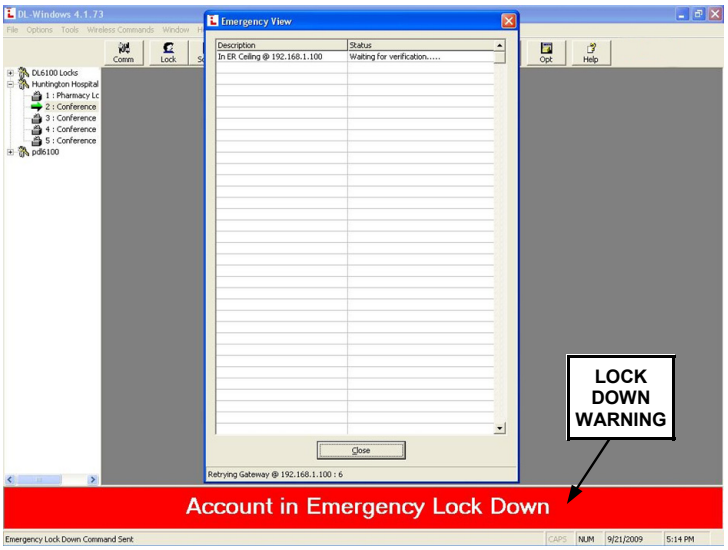
As the Gateways process the Lock Down Command, the **Status** column indicates "**Waiting for verification...**". Note the bottom of the **Emergency View** screen displays the IP address of the processing Gateway and the processing duration of the Command, in seconds. All unverifiable requests timeout in 140 seconds.

When all locks in the Gateway are verified as locked, the **Status** column cell turns red, indicating "**All Locks Secure**".

Unable to verify all locks

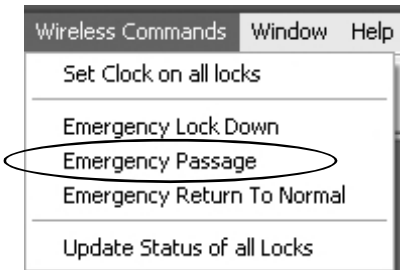
Note: If some or all locks in the Gateway cannot be confirmed as locked via the wireless signal, the Status column turns yellow, reading "**Unable to verify all locks**". Although these physical locks may indeed be locked, to view the locks that are unable to be wirelessly verified as locked, proceed as follows:

1. Click the **GW Confg** button to open the **Gateway Configuration** screen.
2. Click to highlight a specific Gateway in the list.
3. Click **Tools**, **View Gateway's Lock Table**. The **Lock Status** column clearly indicates which lock(s) are unverifiable.



LOCK DOWN WARNING

Wireless Commands > Emergency Passage



DL-WINDOWS MAIN SCREEN, WIRELESS COMMANDS MENU

On the DL-Windows main screen, click **Wireless Commands**, **Emergency Passage** to unlock all wireless locks in the current Account.

IMPORTANT: Threats such as fire emergencies, bomb threats or the release of hazardous substances within a protected premises may require an "Emergency Passage" Command to allow for a facility evacuation.

Other threats such as terrorist attacks, hostile intruder situations, the outdoor release of hazardous substances, tornado emergencies and other life-threatening events, may require an "Emergency Lock Down" - the opposite of a facility evacuation.

It is strongly advised that all facilities develop separate Emergency Lock Down and Emergency Passage procedures appropriate for the specific premises, and these Emergency procedures be frequently practiced and continually refined.

The **Emergency Passage** wireless Command unlocks all wireless physical locks within the current Account, allowing "passage" through the door.

An **Emergency Passage** Command sent to a lock in either **Normal** mode or in **Emergency Lock Down** mode overrides either existing mode and places the lock in **Emergency Passage** mode.

IMPORTANT: Once in **Emergency Passage** mode, the wireless physical lock(s) may be taken out of Passage mode manually (using the Function 49 keypad Command). In addition, when the lock is in an "**Emergency**" state, all User Codes are disabled at the keypad except for User Code #1 (the Master Code) and User Codes 2 through 9 (assuming the "**Users are disabled during Lockdown**" check box in the **Programmable Features** screen, ***Options*** tab is checked).



Emergency View Screen

Click **Wireless Commands**, **Emergency Passage** and the DL-Windows main screen flashes a yellow and red "**Passage**" warning located to the right of the **Help** button. The **Emergency View** screen appears, displaying all Gateways in the current Account, their descriptions (names and IP addresses) and current (real-time) status. As the Gateways process the Passage Command, the **Status** column indicates "**Waiting for verification...**". Note the bottom of the **Emergency View** screen displays the IP address of the processing Gateway and the processing time of the Command, in seconds. All unverifiable requests timeout in 140 seconds.

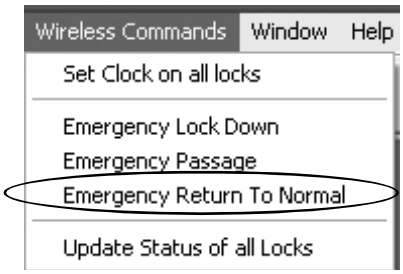
When all locks in the Gateway are confirmed as unlocked, the **Status** column turns green, reading "**All Locks in Passage**".

Unable to verify all locks

Note: If some or all locks in the Gateway cannot be confirmed as unlocked via the wireless signal, the Status column turns yellow, reading "**Unable to verify all locks**". Although these physical locks may indeed be unlocked, to view the locks that are unable to be wirelessly verified as unlocked, proceed as follows:

1. Click the **GW Confg** button to open the **Gateway Configuration** screen.
2. Click to highlight a specific Gateway in the list.
3. Click **Tools**, **View Gateway's Lock Table**. The **Lock Status** column clearly indicates which lock(s) are unverifiable.

Wireless Commands > Emergency Return to Normal



DL-WINDOWS MAIN SCREEN, WIRELESS COMMANDS MENU

On the DL-Windows main screen, click **Wireless Commands**, **Emergency Return to Normal** to discontinue the "Emergency" state--either **Emergency Lock Down** or **Emergency Passage**--for all wireless locks in the current Account.

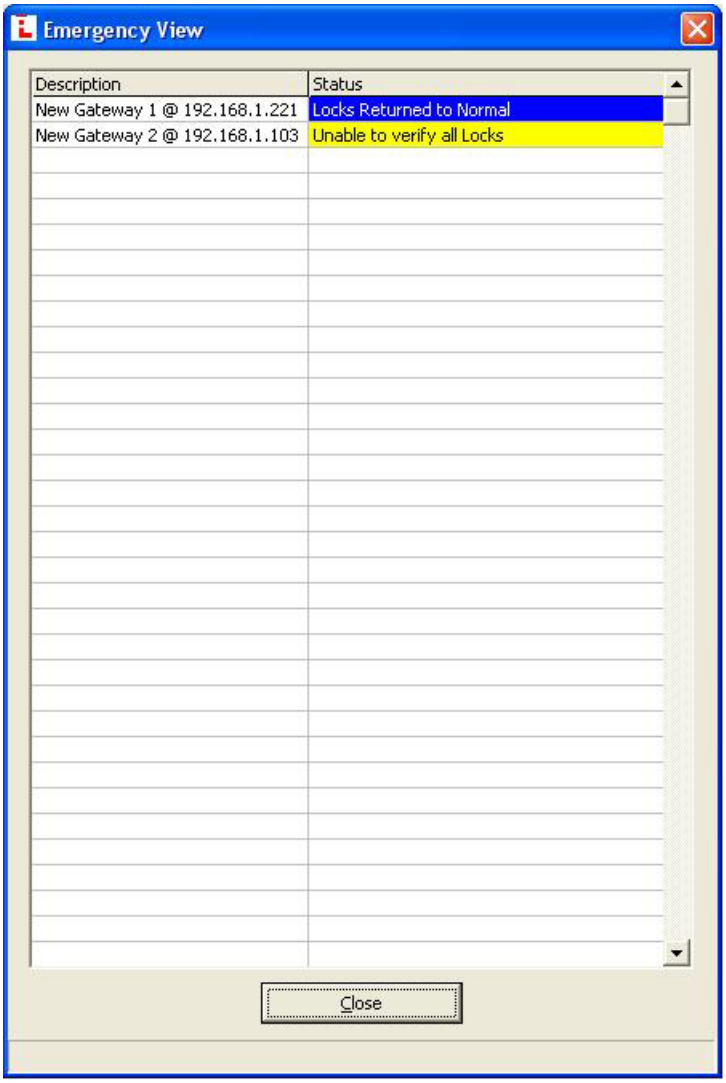
The **Emergency Lock Down** wireless Command attempts to lock all wireless physical locks within the current Account. The **Emergency Passage** wireless Command attempts to unlock all wireless physical locks within the current Account, allowing "passage" through the door.

Initiating the **Emergency Return to Normal** Command reverts all wireless physical locks within the current Account to the state they were in prior to initiating the Emergency condition.

Emergency View Screen

Click **Wireless Commands**, **Emergency Return to Normal** and the DL-Windows main screen removes the flashing yellow and red "**Account in Emergency Passage**" or "**Account in Emergency Lock Down**" warning located at the bottom of the screen. The **Emergency View** screen appears, displaying all Gateways in the current Account, their descriptions (names and IP addresses) and current (real-time) status. As the Gateways process the Return to Normal Command, the **Status** column indicates "**Waiting for verification...**". Note the bottom of the **Emergency View** screen displays the IP address of the processing Gateway and the processing time of the Command, in seconds. All unverifiable requests timeout in 140 seconds.

When all locks in the Gateway are confirmed as returning to their "pre-Emergency" state, the **Status** column cell turns blue, reading "**Locks Returned to Normal**".



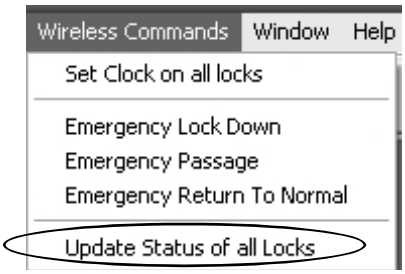
EMERGENCY VIEW SCREEN, DISPLAYING THE STATUS OF LOCKS ASSIGNED TO TWO GATEWAYS

Unable to verify all locks

Note: If some or all locks in the Gateway cannot be confirmed as "normal" via the wireless signal, the Status column turns yellow, reading "**Unable to verify all locks**". Although these physical locks may indeed be in their "normal" state, to view the locks that are unable to be wirelessly verified, proceed as follows:

1. Click the **GW Confg** button to open the **Gateway Configuration** screen.
2. Click to highlight a specific Gateway in the list.
3. Click **Tools**, **View Gateway's Lock Table**. The **Lock Status** column clearly indicates which lock(s) are unverifiable.

Wireless Commands > Update Status of all Locks



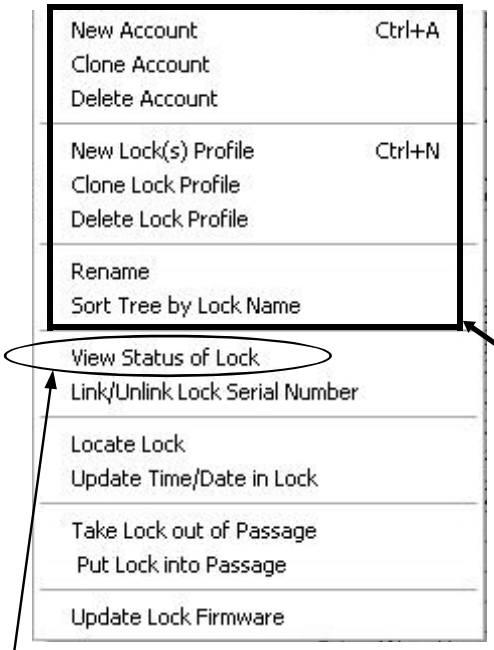
DL-WINDOWS MAIN SCREEN, WIRELESS COMMANDS MENU

On the DL-Windows main screen, the **Wireless Commands**, **Update Status of all Locks** menu item initiates an internal status request as follows: DL-Windows contacts (and requests a current status of) all physical locks assigned to all Gateways in the current Account. Each Gateway's Lock Table , request a status

DL-Windows contacts all Gateways in the current Account and requests a current status of all physical locks assigned. The data received from each lock updates each Gateway's Lock Table. When this Lock Table is subsequently viewed, the Table displays the information as of the time the "**Wireless Commands**, **Update Status of all Locks "** command was performed.

View the Lock Table by clicking the **GW Confg** button to open the **Gateway Configuration** screen, then click to highlight a specific Gateway in the list, then click **Tools**, **View Gateway's Lock Table** (see page 30).

Right-Click Profile Menu > View Status of Lock



Access this menu by first selecting a Profile in an Account. Accounts are listed the white box area (the Account Tree area) at the left side of the DL-Windows main screen (click the small "+" sign next to the Account name, and all Profiles in the Account appear).

Double-click the padlock icon representing a Profile. The **Lock Data** screen opens and a green arrow appears next to the Profile. Click the green arrow to select the Profile (a blue highlight box appears around the Profile name). Right-click the Profile to open the right-click menu shown at left.

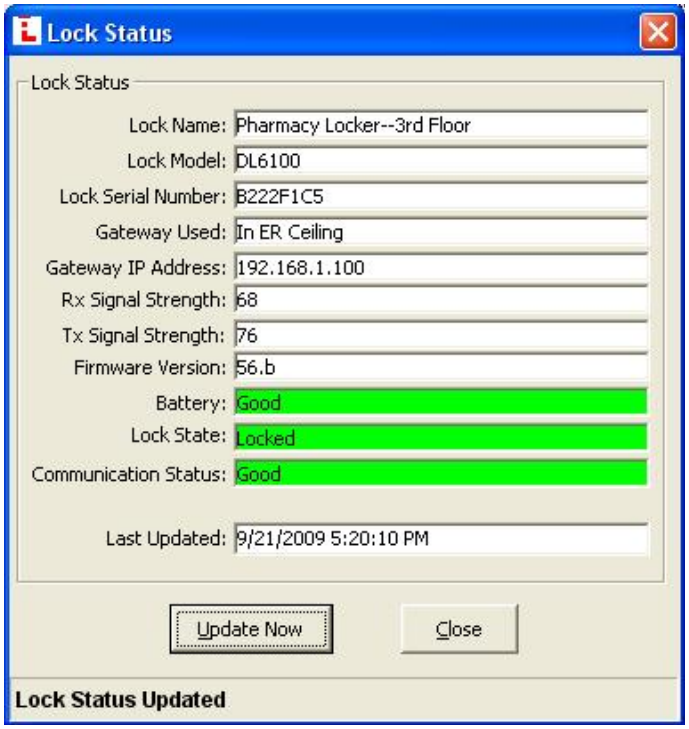


Note: The items in this menu listed above "**View Status of Lock**" (such as "**New Account**", etc.) are items that existed before DL-Windows version 4.0.0 software. For information regarding these menu items, see OI237.

Click the "**View Status of Lock**" menu item and the system sends a status request (its current state or condition) to all physical locks linked to the selected Profile. The **Lock Status** screen appears.

Note: If the lock network settings (such as the IP address of the Gateway) have changed within DL-Windows, a warning popup appears (see image below). Click **OK** to continue.





Lock Name

Text name of the lock Profile, as specified when the lock was added to DL-Windows using the **New Lock** screen.

Lock Model

Specifies the style of Trilogy Networx™ series door lock, such as "PDL6100", "DL6100" or "PL6100" (including other model types that may be developed in the future).

Lock Serial Number

Displays the lock's unique serial number assigned and programmed into the lock firmware at the factory. Each Networx™ lock is identified in the system by this unique serial number.

Gateway Used

Text name of the Gateway to which the selected lock Profile is assigned.

Gateway IP Address

Specifies the IP Address on the TCP/IP network currently assigned to the Gateway. Required for communication.

Rx Signal Strength

Indicates the radio transmission strength, as measured between the Gateway and the lock; a higher number (closer to 100) indicates a stronger signal.

Tx Signal Strength

Indicates the radio transmission strength, as measured between the Gateway and the lock; a higher number (closer to 100) indicates a stronger signal.

Firmware Version

Identifies the specific edition or release of the current lock's Trilogy Networx™ firmware. The firmware is stored in memory chips that are located inside each lock.

Battery

Indicates if the strength of the total battery voltage is sufficient to power the lock firmware, radio and electromechanical parts located inside the lock.

Lock State

(Same as "**Lock Status**"). Indicates whether the physical lock is currently locked, unlocked, in Emergency Passage ("Passage") or In Emergency Lock Down ("In Lock Down"). To set Emergency Passage or Emergency Lock Down, see the **Emergency Commands** menu on page 49.

Communication Status

Indicates the condition of the radio connection between the Gateway and the selected lock.

If an error is indicated, open the **Gateway Configuration** screen, click **Tools**, **View Gateway's Lock Table** to determine which lock generated the error.

Last Updated

Indicates the date and time the current **Lock Status** screen was changed with new elements of data.

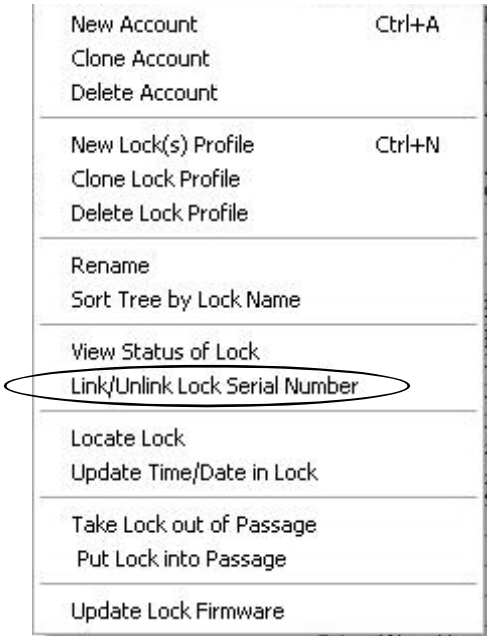
Update Now (button)

Click to delete all existing data elements appearing in this screen and request new data be generated based on the current condition of the selected lock.

Close (button)

Click to exit this dialog.

Right-Click Profile Menu > Link/Unlink Lock Serial Number



Access this menu by first selecting a Profile in an Account. Accounts are listed the white box area (the Account Tree area) at the left side of the DL-Windows main screen (click the small "+" sign next to the Account name, and all Profiles in the Account appear).

Double-click the padlock icon representing a Profile. The **Lock Data** screen opens and a green arrow appears next to the Profile. Click the green arrow to select the Profile (a blue highlight box appears around the Profile name). Right-click the Profile to open the right-click menu shown at left.



In DL-Windows, the word "Link" is used to describe the specific action of associating a "virtual lock" Profile to the serial number of the physical lock installed on a door. These "virtual lock" Profiles are created in DL-Windows and are used to simulate the "real" locks installed in the premises. These Profiles contain the instructions that a real lock uses to perform its various functions (such as User Codes, Features, Time Zones and Schedules). These instructions are essentially database files that are stored inside the lock memory.

Click the "**Link/Unlink Lock Serial Number**" to either link the selected lock Profile to a different physical lock serial number or unlink an existing lock Profile and physical lock serial number.



Lock Name

Text name of the lock Profile, as specified when the lock was added to DL-Windows using the **New Lock** screen.

Currently Linked to

Displays the lock's unique serial number programmed into the lock firmware at the factory. Each Networx™ lock is identified in the system by this unique serial number. If the selected Profile is currently not linked to a physical lock, the text "**Lock is currently Not Linked**" appears in this field.

Available Serial Numbers

This pull-down list displays the lock serial numbers of all physical locks of the same lock model discovered by all Gateways in the current Account. All lock serial numbers are unique and assigned to the physical lock at the factory.

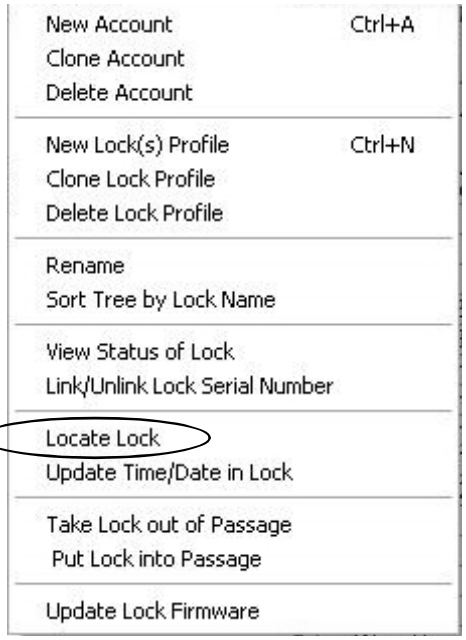
Link (button)

Click this button to link the selected Profile (in the **Lock Name** field) with the selected "real" lock serial number (in the **Available Serial Numbers** pull-down list).

Unlink (button)

Click to unlink the existing association (link) between the lock Profile displayed in the **Lock Name** field and the physical lock serial number displayed in the **Currently Linked to** field. Note that after unlinking, the physical lock serial number previously displayed in the **Currently Linked to** field is then displayed in the **Available Serial Numbers** pull-down list ready to be re-linked.

Right-Click Profile Menu > Locate Lock



Access this menu by first selecting a Profile in an Account. Accounts are listed the white box area (the Account Tree area) at the left side of the DL-Windows main screen (click the small "+" sign next to the Account name, and all Profiles in the Account appear).

Double-click the padlock icon representing a Profile. The **Lock Data** screen opens and a green arrow appears next to the Profile. Click the green arrow to select the Profile (a blue highlight box appears around the Profile name). Right-click the Profile to open the right-click menu shown at left.

This option requests that the lock linked to the selected lock Profile beep and flash its red LED; used when you wish to find the physical lock or to confirm the wireless connection is operational. Click this selection and the **Select Locate Time** popup appears:

Select Locate Time in Seconds

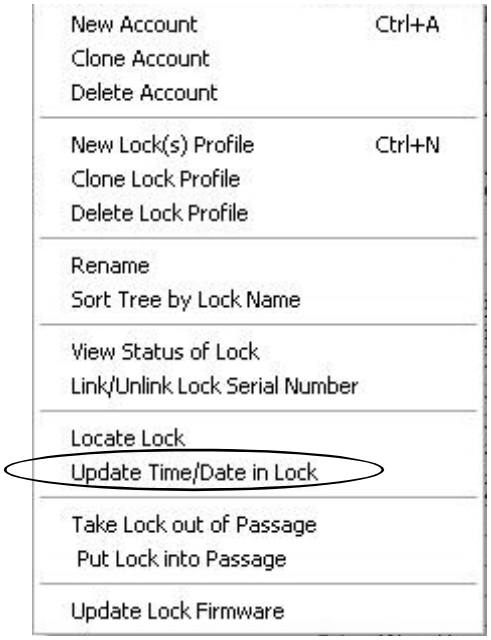
Click the pull-down menu to select the *Locate Time* in seconds. Up to 255 seconds (4 minutes 15 seconds) can be selected; default duration is 30 seconds.

Click **OK**, and the lock linked to the selected lock Profile will beep and flash its red LED for the selected duration.

Click **Cancel** to exit without requesting this action.



Right-Click Profile Menu > Update Time/Date in Lock



Access this menu by first selecting a Profile in an Account. Accounts are listed the white box area (the Account Tree area) at the left side of the DL-Windows main screen (click the small "+" sign next to the Account name, and all Profiles in the Account appear).

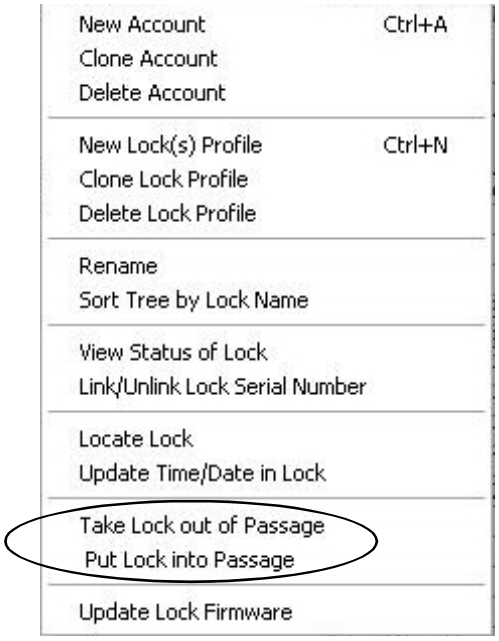
Double-click the padlock icon representing a Profile. The **Lock Data** screen opens and a green arrow appears next to the Profile. Click the green arrow to select the Profile (a blue highlight box appears around the Profile name). Right-click the Profile to open the right-click menu shown at left.

This option retrieves the current time and date from the computer running DL-Windows for distribution (through the associated Gateway) to the selected physical wireless lock. You may wish to perform this action to ensure the audit trail (logs) reflect an accurate time and date; . **Note:** The **Update Time/Date in Lock** operation appears in the audit trail logs as with any other operation.

Note: When **Update Time/Date in Lock** is clicked, the bottom of the DL-Windows main screen displays real-time operational text, including the IP address of the selected lock's assigned Gateway, "Sending set clock..." and other text messages.

Right-Click Profile Menu > Take Lock out of Passage

Right-Click Profile Menu > Put Lock into Passage



Access this menu by first selecting a Profile in an Account. Accounts are listed the white box area (the Account Tree area) at the left side of the DL-Windows main screen (click the small "+" sign next to the Account name, and all Profiles in the Account appear).

Double-click the padlock icon representing a Profile. The **Lock Data** screen opens and a green arrow appears next to the Profile. Click the green arrow to select the Profile (a blue highlight box appears around the Profile name). Right-click the Profile to open the right-click menu shown at left.

What is "Passage"?
"**Passage**" means to "unlock" the physical lock, allowing "passage" through the door.

- **Take Lock out of Passage** = "Securing" the lock
- **Put Lock into Passage** = "Unlocking" the lock

IMPORTANT: If the selected wireless physical lock is in…

- **Emergency Passage** mode (see page 52)

--or in--

- **Emergency Lock Down** mode (see page 51)

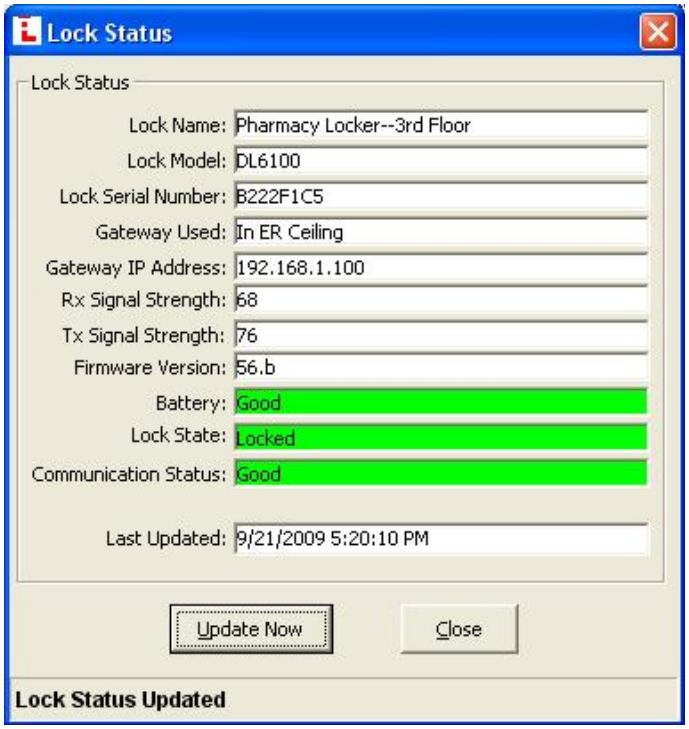
...the selected wireless physical lock MUST be taken out of its **Emergency** mode before either the **Take Lock out of Passage** or the **Put Lock into Passage** command will operate.

In addition, when a lock is in an "**Emergency**" state, all User Codes are disabled at the keypad except for User Code #1 (the Master Code) and User Codes 2 through 9.

Take Lock out of Passage
Put Lock into Passage
Click either option and the bottom of the DL-Windows main screen displays real-time operational text, including "Sending Passage command to Gateway…" and other text messages.

The **Lock Status** dialog automatically opens:

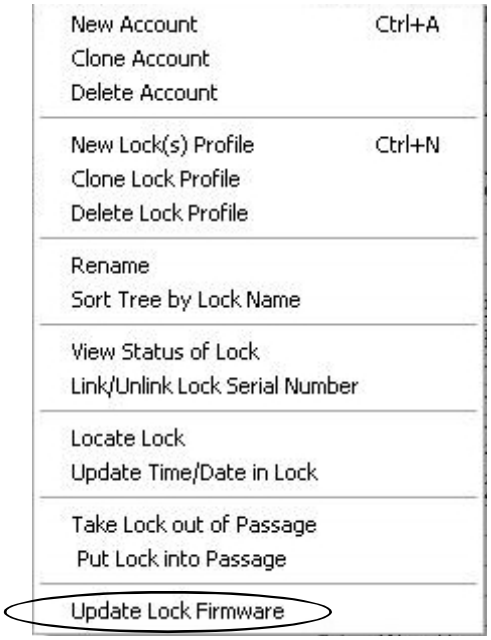
The image at right displays an example of the **Lock Status** screen after a **Put Lock into Passage** command is sent.



Unable to verify all locks
Note: If some or all locks in the Gateway cannot be confirmed as unlocked via the wireless signal, the Status column turns yellow, reading "**Unable to verify all locks**". Although these physical locks may indeed be unlocked, to view the locks that are unable to be wirelessly verified as unlocked, proceed as follows:

1. Click the **GW Confg** button to open the **Gateway Configuration** screen.
2. Click to highlight a specific Gateway in the list.
3. Click **Tools**, **View Gateway's Lock Table**. The **Lock Status** column clearly indicates which lock(s) are unverifiable.

Right-Click Profile Menu > Update Lock Firmware



Access this menu by first selecting a Profile in an Account. Accounts are listed the white box area (the Account Tree area) at the left side of the DL-Windows main screen (click the small "+" sign next to the Account name, and all Profiles in the Account appear).

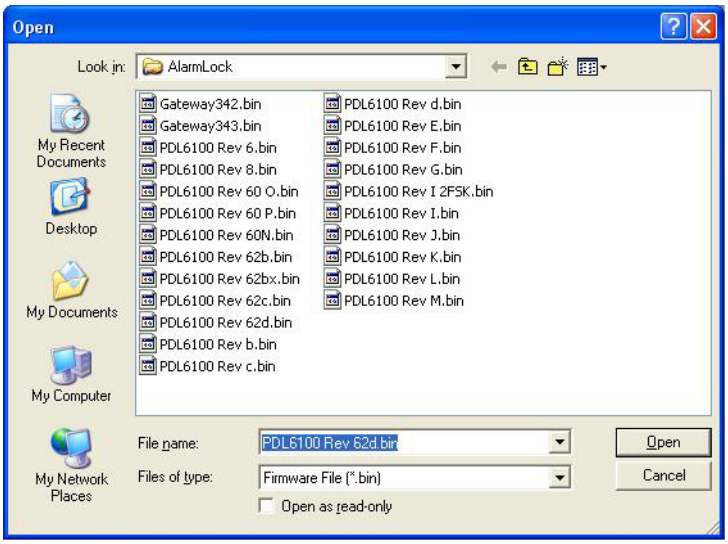
Double-click the padlock icon representing a Profile. The **Lock Data** screen opens and a green arrow appears next to the Profile. Click the green arrow to select the Profile (a blue highlight box appears around the Profile name). Right-click the Profile to open the right-click menu shown at left.

Allows the updating of the firmware stored inside the memory of the physical wireless lock(s).

The standard Windows **Open** dialog box appears (shown at right), allowing you to browse for the binary ".bin" file containing the firmware update.

Once the binary ".bin" file is selected (highlighted), click **Open** to initiate the update process.

Note: The image shown at right displays both lock firmware and Gateway firmware ".bin" files in the same directory. Be sure the file selected in the **File name** field is of the correct type before initiating the update process.



TROUBLESHOOTING

LOCK TABLE COMM FAILURE

I tried to discover a lock and it returns with a Lock Table that indicates a "Communications Failure". What to do?

In this case, the Gateway is unable to communicate with the lock. Be sure the lock is operational (check the batteries are fresh and plugged into the lock correctly). When "discovering" a lock, the Gateway sends "configuration data" in the form of a "Lock Configuration Table" to the selected locks. This "configuration data" contains items--an internal lock designation, a specific radio channel and security data--that are all embedded in the "Lock Configuration Table". This "configuration data" instructs the physical lock to communicate ONLY with that Gateway and prevents other Gateways from communicating with that physical lock.

Try resending the "Lock Configuration Table". Click the **GW Confg** button to open the **Gateway Configuration** screen. Click **Tools**, **Send Lock Config Table to Selected Gateway**.

COMPUTER CRASH!

My computer running DL-Windows just crashed! I had a working system, complete with wireless locks, Gateways and a computer running DL-Windows--but that computer no longer works! What do I do?

The Gateways and wireless locks are still up and running, and therefore they still hold the configuration data ("Lock Tables") necessary to get your system working. Retrieve that data from the Gateways using the "Tools, Import" options designed for just this kind of situation. Proceed as follows:

Re-install DL-Windows on another computer (if necessary). Click the **GW Confg** button to open the **Gateway Configuration** screen. Turn to page 38 and read about the **Tools**, **Import** utilities.

BAD SECURITY CODE

A "Bad Security code" popup just appeared...what do I do?



If you are trying to discover Gateways or locks, and new Gateways and/or locks are found within radio range but are already in use within another Account, DL-Windows "protects itself" by disallowing any Gateways or locks already in use within another Account by triggering this warning popup.

There must be a way for DL-Windows to differentiate between separate wireless Accounts. For example, if a large office building has one company on the 15th floor and another company on the 16th floor, radio signals can overlap from these two separate Accounts. How does DL-Windows prevent this confusion between wireless signals from two separate Accounts? The answer is to require a unique "Security Password" for each Account, and to embed that password within all of the Account's radio transmissions. This popup is simply warning you that DL-Windows detected a Gateway or a lock already in use within another Account. Click **OK** to close this popup. Try re-discovering the Gateway or the lock (click the **GW Confg** button to open the **Gateway Configuration** screen). If you need to install a new Gateway device because existing Gateways are out of radio range of a newly installed lock, see page 24 "**Adding a new Gateway to an existing system**" for instructions.

Note: This popup can also appear if the Gateway was not "reset" by pressing the **RESET** button (turn to page 25 and follow the "**Resetting the Gateway**" instructions for a "**Full Reset**").

BATTERY REPLACEMENT PROBLEMS

I just replaced the lock batteries--but I accidentally lost the lock programming! What do I do?

It is difficult to lose the lock programming when replacing batteries--to erase the programming you actually need to disconnect the batteries and press and hold a keypad button for several seconds.

If you disconnect the batteries and briefly touch a key accidentally, you may only lose the time/date information. In this case, simply turn to page 59 and follow the procedure for the "**Right-Click Profile Menu > Update Time/Date in Lock**".

If you disconnect the batteries, accidentally hold down a key for several seconds and indeed lose the lock programming, keep in mind that although this physical lock has lost its programming, both DL-Windows and the Gateway still consider the state of this physical lock as unchanged (still powered up and in operation). The solution is to perform the same procedure as "Replacing a physical lock" shown on page 22, but to re-discover the same lock on the same Gateway. Proceed as follows:

Find the yellow Lock ID Card containing the serial number of the physical lock in question. Have this Lock ID Card available when you use DL-Windows. If you do not have the yellow Lock ID Card, the serial number is located inside the lock on the keypad side--difficult to retrieve for locks already installed on doors.

In DL-Windows, click the **GW Confg** button to open the **Gateway Configuration** screen. Click to highlight the Gateway in the list to which the lock was assigned, then click **Tools**, **Delete Locks by Serial Number**.

The **Delete Serial Number(s)** screen opens. Find and

place a check in the check box next to the lock's serial number and click the **Delete Selected Serial Number(s)** button.

In the **Gateway Configuration** screen, click the **Number of Locks to Discover** pull-down list and select a number of locks that you want to detect; in this case, you can select "1" because you are only re-adding this one lock to the system. Click the **Discover Locks On Selected Gateway** button to initiate the search.

A popup screen entitled "**Discovered 1 Locks**" will appear, indicating the serial number of the lock (along with its signal strength and lock model)

Re-add the lock serial number to the Gateway by placing a check in the check box next to the lock's serial number. Click the **Use Selected Locks** button.

A **Link Locks** popup appears asking if you want to link your new locks now (if the popup does not appear, click **Tools**, **Link / Unlink Lock Profiles**. Click **Yes** to open the **Link / Unlink Lock Profiles** screen.

In the "**Available Lock Profiles**" field, click the Profile previously assigned to the lock, and click the serial number of the lock in the "**Available Lock(s) By Serial Number**" field.

After linking, a **Send Profile to Lock Now** popup automatically appears requesting if you wish to send the lock Profile to the physical lock (if the **Send Profile to Lock Now** popup does not appear, go to the DL-Windows main screen, click to highlight the lock Profile, then click the **Comm** button and click **Communicate with current Network lock**). The **DL-Windows Network Lock Comm Screen** opens. Check "**All**" and click the **Start Communication** button. When communication is complete, click the **Close** button. You're done!

RESET GATEWAY ISSUES

How do I reset the Gateway and what effect will it have on my system?

Turn to page 25 and follow the "**Resetting the Gateway**" instructions for a "**Partial Reset**".

After a "**Partial Reset**" is performed, all Gateway Lock Table data is also erased, and the Gateway is ready to be re-discovered. The "Configuring DL-Windows for Wireless Lock Use" section on page 15 has the instructions necessary to get this "new" Gateway back into the system--but start with step 3 on page 17. Listed here are all the steps starting with step 3:

3. **Discover New Gateways**
4. **Add ("Assign") the Gateway to an Account**
5. **Discover physical locks on the Gateway**
6. **Assign (add) discovered locks to the Gateway**
7. **Link lock to a Profile**
8. **Send Profile to lock**

Note: After a "**Full Reset**" is performed, all Gateway Lock Table data and network settings are erased, and the Gateway is reset to its original factory condition.

GATEWAY IN RED COLOR

One of the Gateways listed in the Gateway Configuration screen is colored RED.

--or in other words--

How do I re-establish communication with a "lost" Gateway?

A working Gateway (discovered on the network, assigned to an Account and operational) is listed in the **Gateway Configuration** screen in ***blue*** colored text. When a working Gateway has subsequently lost communication with the network and the **Gateway Configuration** screen is opened, the Gateway appears listed in ***red*** colored text.

If you see a Gateway listed in red, either the network or the physical Gateway device is responsible. Click to select the red colored Gateway in the list, then click **Actions**, **Relocate Gateways (Displayed in red)** to try to re-discover the problem Gateway through the network. See page 45 ("**Actions > Relocate Gateways (Displayed in red)**") for the complete procedures.

LOST LOCK

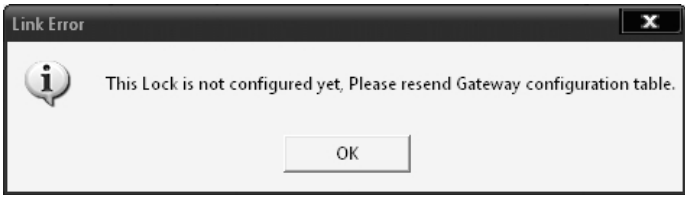
How do I re-establish communication with a "lost" lock?

If you lost communication with a lock, first verify a few basic details:

1. Has something changed to affect communications? Is the lock still on the door? Did someone remove the door for some kind of maintenance? Has furniture been moved around and now there is something that is blocking the radio signal to the Gateway?
2. Is the lock still functioning? Find the physical lock and attempt to unlock by entering a working User Code. Are the key-presses cause beeping sounds?
3. Check the radio signal from the Gateway using the test tool. Is the signal strength weak?
4. If the test tool is not available, try to determine if the distance between the lock and GW is greater than 75 to 100 feet. A new Gateway may need to be installed (see page 24, "**Adding a new Gateway to an existing system**").
5. Take the lock off the door, bring the lock physically closer to a Gateway and try to re-discover the lock.
6. If the signal strength to that lock has always been strong and suddenly it is non-existent, the lock may have an internal failure. Try the procedure in the section named "**I just replaced the lock batteries--but I accidentally lost the lock programming**" above (see page 62). This procedure is basically de-

leting the lock serial number from DL-Windows ("**Delete Serial Number(s)** screen"), then using DL-Windows to re-discover the same lock.

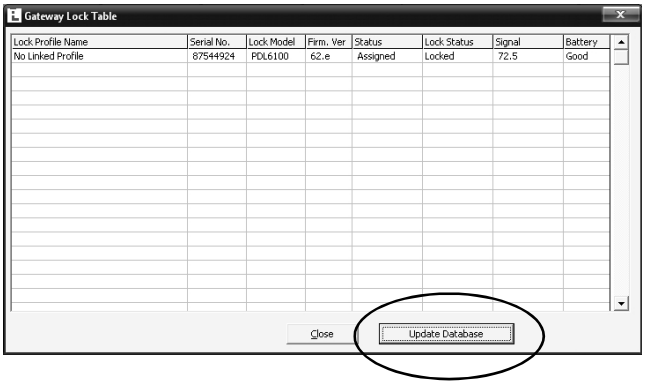
"LOCK NOT CONFIGURED YET"



The above popup message appears due to a possible communication error during the lock discovery / configuration process (the Gateway was unable to "configure" the lock). See the "Configure" definition in the **Terminology** section on page 9 for a complete explanation.

The solution is to re-send the configuration data to the lock as follows:

a. Click **OK** to close the above popup. Click the **GW Confg** button to open the **Gateway Configuration** screen.
b. Click **Tools**, **View Gateway's Lock Table**.
c. Click the **Update Database** button located at the bottom of the **Gateway Lock Table** screen (circled):



d. Try linking again. If the same popup appears, then the communication link between the Gateway and the physical lock could be suspect. See the troubleshooting issue "**LOCK TABLE COMM FAILURE**" above in this section.

"GATEWAYS MUST HAVE A STATIC IP"



The above popup message appears when an "Emergency" Command is initiated in DL-Windows (via the **Wireless Commands** menu) but the Gateways in the system are not assigned static IP addresses.

The solution is to first configure each Gateway with a static IP address, then ensure that these static IP addresses are distributed to all Gateways in the system. Proceed as follows:

a. Click the **GW Confg** button to open the **Gateway Configuration** screen.
b. Click to highlight a specific Gateway in the list, then click **Tools**, **Configure Network Settings**. The **Network Configuration** screen opens.
c. Un-check the "**Use DHCP**" checkbox if checked.
d. In the "**IP Address**" field, enter a unique static IP address. Static IP addresses can be obtained from either the router setup guide (if a router is used) or from your network administrator who has provided unique static IP addresses for each Gateway in your system.
e. Repeat steps a-d for each Gateway in the system.
f. After all Gateways are configured with a static IP address, click the **GW Confg** button to open the **Gateway Configuration** screen (if it is not open already). Click **Tools**, **Send IP Table to all Gateways** to send the "IP Table" to ALL Gateways in the system (the "IP Table" is a special table in DL-Windows that contains all of the static IP addresses of each Gateway in the system).

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HID and Microsoft Windows® are trademarks of their respective companies.

NOTES

NOTES

RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

Changes and Modifications not expressly approved by Napco can void your authority to operate this equipment under Federal Communications Commissions rules.

ALARM LOCK LIMITED WARRANTY

ALARM LOCK SYSTEMS, INC. (ALARM LOCK) warrants its products to be free from manufacturing defects in materials and workmanship for twenty four months following the date of manufacture. ALARM LOCK will, within said period, at its option, repair or replace any product failing to operate correctly without charge to the original purchaser or user.

This warranty shall not apply to any equipment, or any part thereof, which has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to acts of God, or on which any serial numbers have been altered, defaced or removed. Seller will not be responsible for any dismantling or reinstallation charges, environmental wear and tear, normal maintenance expenses, or shipping and freight expenses required to return products to ALARM LOCK. Additionally, this warranty shall not cover scratches, abrasions or deterioration due to the use of paints, solvents or other chemicals.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF ALARM LOCK.

Any action for breach of warranty, including but not limited to any implied warranty of merchantability, must be brought within the six months following the end of the warranty period.

IN NO CASE SHALL ALARM LOCK BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT.

In case of defect, contact the security professional who installed and maintains your security system. In order to exercise the warranty, the product must be returned by the security professional, shipping costs prepaid and insured to ALARM LOCK. After repair or replacement, ALARM LOCK assumes the cost of returning products under warranty. ALARM LOCK shall have no obligation under this warranty, or otherwise, if the product has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to accident, nuisance, flood, fire or acts of God, or on which any serial numbers have been altered, defaced or removed. ALARM LOCK will not be responsible for any dismantling, reassembly or reinstallation charges, environmental wear and tear, normal maintenance expenses, or shipping and freight expenses required to return products to ALARM LOCK. Additionally, this warranty shall not cover scratches, abrasions or deterioration due to the use of paints, solvents or other chemicals.

This warranty contains the entire warranty. It is the sole warranty and any prior agreements or representations, whether oral or written, are either merged herein or are expressly cancelled. ALARM LOCK neither assumes, nor authorizes any other person purporting to act on its behalf to modify, to change, or to assume for it, any other warranty or liability concerning its products.

In no event shall ALARM LOCK be liable for an amount in excess of ALARM LOCK's original selling price of the product, for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of any failure of the product. Seller's warranty, as hereinabove set forth, shall not be enlarged, diminished or affected by and no obligation or liability shall arise or grow out of Seller's rendering of technical advice or service in connection with Buyer's order of the goods furnished hereunder.

ALARM LOCK RECOMMENDS THAT THE ENTIRE SYSTEM BE COMPLETELY TESTED WEEKLY.

Warning: Despite frequent testing, and due to, but not limited to, any or all of the following; criminal tampering, electrical or communications disruption, it is possible for the system to fail to perform as expected. ALARM LOCK does not represent that the product/system may not be compromised or circumvented; or that the product or system will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; nor that the product or system will in all cases provide adequate warning or protection. A properly installed and maintained alarm may only reduce risk of burglary, robbery, fire or otherwise but it is not insurance or a guarantee that these events will not occur. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO GIVE WARNING. Therefore, the installer should in turn advise the consumer to take any and all precautions for his or her safety including, but not limited to, fleeing the premises and calling police or fire department, in order to mitigate the possibilities of harm and/or damage.

ALARM LOCK is not an insurer of either the property or safety of the user's family or employees, and limits its liability for any loss or damage including incidental or consequential damages to ALARM LOCK's original selling price of the product regardless of the cause of such loss or damage.

Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, or differentiate in their treatment of limitations of liability for ordinary or gross negligence, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.